

Stoy, Alyse

From: Sanders, LaTonya
Sent: Wednesday, December 10, 2014 4:37 PM
To: Whitley, Christopher; Washburn, Ben
Subject: FW: Starting draft of desk statement for release of USGS report

From: Slugantz, Lynn
Sent: Wednesday, December 10, 2014 4:32 PM
To: Vann, Bradley; Field, Jeff
Cc: Jefferson, Matthew; Jackson, Robert W.; Stoy, Alyse; Sanders, LaTonya
Subject: Starting draft of desk statement for release of USGS report

Superfund folks – based on our conversation on Monday, I have put together a few bullets for a desk statement. Please view this document on the “h” drive and edit as you see fit by COB on Friday the 12th so that LaTonya and others in OPA can work on having this ready for next week.

Here is the link to the draft desk statement.
[H:\REGION SHARE\West Lake Schedule Tracker\Desk Statements\2014-12-17 USGS Report Desk Statement.docx](#)

Thank you,

Lynn M. Slugantz
Office of Regional Administrator
US EPA Region 7
11201 Renner Blvd, Lenexa KS 66219
(913) 551-7883 (d)
(913) 048-1129 (c)

Stoy, Alyse

From: Schumacher, John <jschu@usgs.gov>
Sent: Friday, November 14, 2014 1:07 PM
To: Slugantz, Lynn
Subject: Fwd: USGS study of Bridgeton groundwater

----- Forwarded message -----

From: **Schumacher, John** <jschu@usgs.gov>
Date: Wed, Nov 12, 2014 at 8:00 AM
Subject: Re: USGS study of Bridgeton groundwater
To: "Lacapra, Veronique C." <lacaprav@umsl.edu>

Veronique,

That report is making its way through the final stages of the USGS editorial and approval process so EPA does not yet have it. Its delivery was delayed as I had a unforeseen [REDACTED] that kept me out for about a month. Unfortunately, that translated to a near equivalent delay in getting the report to EPA.. We're working as quickly as we can. Thanks for checking.

Best Regards,

John

On Tue, Nov 11, 2014 at 11:28 AM, Lacapra, Veronique C. <lacaprav@umsl.edu> wrote:

Hello John,

When we spoke in September, you said you thought the EPA might release your Bridgeton groundwater report in November. Do you have any updated information about when the EPA is likely to make that report available?

Thank you,

Veronique

Véronique C. LaCapra, Ph.D.

Science, Environment and Health Reporter

St. Louis Public Radio | 90.7 KWMU

University of Missouri-St. Louis | 3651 Olive Street | St. Louis, MO 63108

314.516.7480 | vlacapra@stlpublicradio.org

twitter.com/KWMUscience

<http://news.stlpublicradio.org/term/health-science-environment>

News That Matters.

Connect with Us:



From: Schumacher, John [mailto:jschu@usgs.gov]
Sent: Tuesday, September 30, 2014 9:14 AM
To: Lacapra, Veronique C.
Subject: Re: USGS study of Bridgeton groundwater

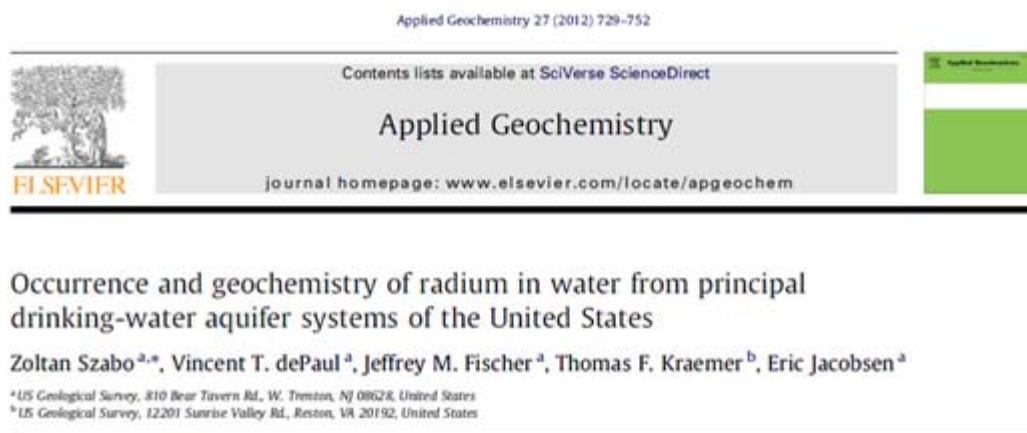
Veronique,

I apologize this did not go out yesterday, apparently I got distracted and never hit the send button and found it in my drafts box.. Per our conversation you asked for some references and I have included several below .I was pleased to be able to provide you some information on background.

You asked about groundwater use in the Bridgeton area and I mentioned that I was not aware of any active domestic wells in the bedrock aquifer in that area. I indicated that much of what we knew about groundwater quality in that area was from previously published reports and from samples collected mostly in the 1930-1970s from water wells. Much of this information was compiled and discussed in a report on the Water Resources of St. Louis County (Miller and others, 1974). This report was a joint effort between the Missouri DNR and USGS and may provide you with a good general framework of the ground and surface-water flow system and water quality in the region. Although a bit old, much of it is still relevant and I'm not sure there is much more recent information except what is currently being collected at the West Lake and Bridgeton facilities.

<http://www.dnr.mo.gov/pubs/WR30.pdf>

You asked about radionuclides in groundwater and seemed surprised when I mentioned that there are naturally occurring instances of radionuclides such as radium in groundwater above the USEPA drinking water Maximum Contaminant Level (MCLs) both nationally and within Missouri. I understand as you mentioned that this fact may confuse some people, however, many constituents that have drinking water MCLs occur naturally and in some cases can occur naturally in groundwater above the MCLs. One of the things I am looking at are the naturally occurring levels of these (radionuclides) constituents in groundwater in the region of the West lake site. The USGS, through our National Water Quality Assessment (NAWQA) program, has been looking into the distribution of radium in groundwater for some time now. Radium geochemistry is not a simple matter but there are some general conditions that often are related to its natural occurrence in groundwater above the MCL. One of the best references is a 2012 article in Applied Geochemistry by Szabo and others and below is a screen shot of that reference.



In regards to naturally occurring radionuclides in Missouri above the MCLs, here is a 2010 Missouri DNR report that I am aware of:

<http://dnr.mo.gov/pubs/pub2439.pdf>

You asked when our evaluation report would be completed and when would it be distributed. I indicated that it is in peer review and that after those reviews are completed the next steps include an editorial review and then a final review by a designated USGS Bureau Approving Official-- mine is in Denver, Colorado. I think the timeline Karl Brooks mentioned in your interview with him last week is accurate and that the USGS process will be completed by early November. Our evaluation will be an administrative report to the USEPA and as far as I know the USGS will not be distributing the document as it is the property of the USEPA and they will be releasing that document. The link below describes our fundamental science practices.

<http://www.usgs.gov/fsp/>

I hope this helps.

Best Regards,

John

On Thu, Sep 25, 2014 at 10:05 AM, Lacapra, Veronique C. <lacaprav@umsl.edu> wrote:

Hello,

I had called your offices yesterday hoping to interview you for a story I was working on, based in part on a conversation I had with EPA R7 Administrator Karl Brooks. He talked about the comprehensive groundwater analysis that your office is doing of geology and hydrology under and around the Bridgeton and West Lake Landfills in St. Louis County. It's also mentioned on the EPA website, here:

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I'd like to speak with one of you to find out more about the analysis. I understand that you wouldn't be able to talk about results at this stage, but I'm interested in the scope. For example, will radioactive compounds be included? Will you be mapping the locations of private drinking water wells, and assessing how they might be affected by any groundwater contamination from the landfills?

My current story aired and posted yesterday (<http://news.stlpublicradio.org/post/what-epa-has-say-about-west-lake-landfill-and-why-everything-taking-so-long>), but I'd still be very interested in speaking with you, even on background, off the record.

Can you please give me a call at your convenience?

Administrator Brooks said your analysis would likely be completed in late October or early November. Once it is finalized, I'd love to receive a copy under embargo and have the opportunity to interview you, before the report is made available publically, if that would be possible.

If you are not able to release the report under embargo, I would still like to speak with you once it's available.

Thank you,

Veronique

(314) 516-7480

Véronique C. LaCapra, Ph.D.

Science, Environment and Health Reporter

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News That Matters.

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John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

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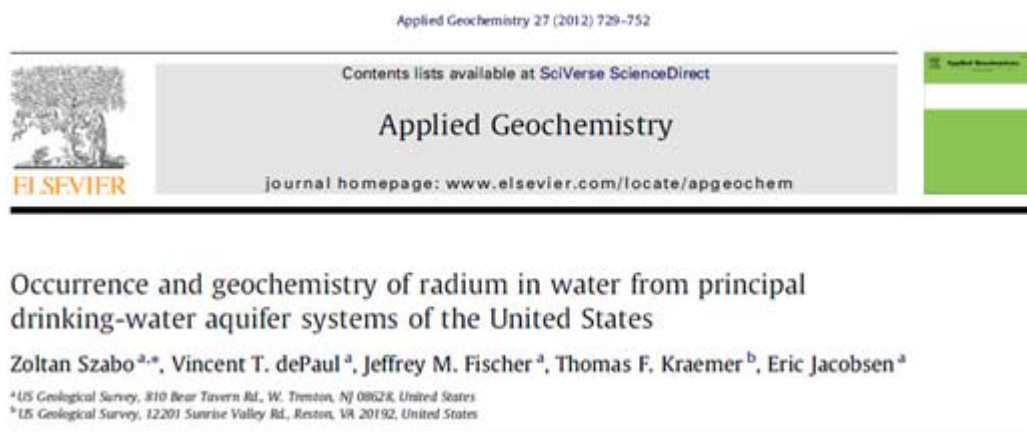
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573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Schumacher, John <jschu@usgs.gov>
Sent: Friday, October 31, 2014 9:56 AM
To: Vann, Bradley
Subject: USGS Westlake work

Follow Up Flag: Follow up
Flag Status: Flagged

Brad,

I'm sure we will be working closely in the future. No doubt Dan, Jeff, or Lynn filled you in on the status of the USGS GW evaluation report. I am still on the mend [REDACTED] but hope to be back in the office part days next week. Perhaps we will find time for a phone introduction.

Lynn has requested we provide her weekly updates on the status of the USGS effort and I think my boss (hiss last day with USGS) will provide her such sometime today.

Cheers,

John

--

John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Slugantz, Lynn
Sent: Monday, September 22, 2014 9:58 AM
To: Bartenfelder, David
Subject: RE: West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]

Hi Dave – because John Schumacher and Dave Kappelman do not have VTC capabilities, we will just go with Adobe Connect this time. I'll update the appointment.

Thank you,

Lynn M. Slugantz
Office of Regional Administrator
US EPA Region 7
11201 Renner Blvd, Lenexa KS 66219
(913) 551-7883 (d)
(913) 048-1129 (c)

From: Bartenfelder, David
Sent: Monday, September 22, 2014 9:38 AM
To: Slugantz, Lynn
Subject: RE: West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]

Lynn-

There is no problem for me getting access to Adobe Connect. I can make arrangements to get VTC as long as the rooms (2) with VTC capability are open. I did not see Dave Kappelman on the invite and I thought he mentioned last week that he would not have VTC capability (he might be in the field).

Thanks-Dave

-----Original Appointment-----

From: Slugantz, Lynn
Sent: Monday, September 22, 2014 10:12 AM
To: Gravatt, Dan; Stoy, Alyse; Field, Jeff; Bartenfelder, David; jschu@usgs.gov
Cc: Legare, Amy
Subject: West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]
When: Wednesday, September 24, 2014 2:30 PM-4:30 PM (UTC-06:00) Central Time (US & Canada).
Where: R7-RO2.C-K09-10/R7-RO

Calendar Hold for Call with USGS John Schumacher and Zoltan Szaro, with R7 and Dave Bartenfelder, OSWER – to discuss findings that will be in USGS' future report to EPA.

If you have access to video conferencing equipment that would be ideal, otherwise we will do adobe connect.

Stoy, Alyse

Subject: West Lake Landfill Call with USGS <https://epa.connectsolutions.com/r6rvm7mx708/>
Call [REDACTED] Code [REDACTED]
Location: R7-RO2.C-K09-10/R7-RO
Start: Wed 9/24/2014 2:30 PM
End: Wed 9/24/2014 4:30 PM
Recurrence: (none)
Meeting Status: Accepted
Organizer: Slugantz, Lynn
Required Attendees: Gravatt, Dan; Stoy, Alyse; Field, Jeff; Bartenfelder, David; jschu@usgs.gov
Optional Attendees: Legare, Amy; Kappelman, David
Categories: Yellow Category

Adobe Connect Calendar Hold - Call to discuss findings that will be in USGS' future report to EPA.

Adobe Connect Address: [REDACTED]
Call In Number: [REDACTED] Code [REDACTED]

R7 – Jeff Field, Dan Gravatt, Alyse Stoy, Lynn Slugantz
USGS John Schumacher and Zoltan Szaro
OSWER - Dave Bartenfelder, Amy Legare and Dave Kappelman

Stoy, Alyse

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Call [REDACTED] Code [REDACTED]
Location: R7-RO2.C-K09-10/R7-RO
Start: Wed 9/24/2014 2:30 PM
End: Wed 9/24/2014 4:30 PM
Recurrence: (none)
Meeting Status: Accepted
Organizer: Slugantz, Lynn
Required Attendees: Gravatt, Dan; Stoy, Alyse; Field, Jeff; Bartenfelder, David; jschu@usgs.gov
Optional Attendees: Legare, Amy; Kappelman, David
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R7 – Jeff Field, Dan Gravatt, Alyse Stoy, Lynn Slugantz
USGS John Schumacher and Zoltan Szaro
OSWER - Dave Bartenfelder, Amy Legare and Dave Kappelman

Stoy, Alyse

From: Slugantz, Lynn
Sent: Friday, September 19, 2014 1:34 PM
To: Brooks, Karl
Cc: Weber, Rebecca; Hague, Mark; Field, Jeff; Carey, Curtis; Stoy, Alyse; Peterson, Mary; Jackson, Robert W.
Subject: Agenda for 9/22 West Lake Update Meeting at 3:00

Agenda for 9/22 West Lake Update Meeting – 3:00 PM

- 1. Expected release of MDHSS report – Mary/Curtis**
- 2. Report from 9/18 Meeting with OSWER – Lynn/Jeff**
- 3. Report from 9/19 Meeting with Republic - Jeff**
- 4. Plans for Sept 29 Congressional briefing and meeting with Earth City Trustees – Mary/Curtis**
- 5. Update on WL webpage redesign - Mary**
- 6. Content for next WL Update - Mary**

Upcoming Activities/Meetings -

9/24 – R7 Call/Adobe Connect with USGS and OSWER re USGS Findings and Recommendations
9/29 Week – Possible Virtual Meeting with USGS/OSWER re Understanding GW Fate and Transport
10/14 – CAG Meeting
10/15 – R7 VTC with OSWER regarding outstanding issues based on NRRB's comments
10/30 – R7 VTC with Mathy Stanislaus/Barry Breen

Potential Future Topics - Other On-Going Action Items –

NRC License Update – Las Vegas Lab/Chuck Hooper checking Lab's Existing License for Coverage
ORD Evaluating SSE Data
R7 Air Monitoring Plans

Thank you,

Lynn M. Slugantz
Office of Regional Administrator
US EPA Region 7
11201 Renner Blvd, Lenexa KS 66219
(913) 551-7883 (d)
(913) 048-1129 (c)

Stoy, Alyse

From: Bartenfelder, David
Sent: Monday, September 15, 2014 12:44 PM
To: Slugantz, Lynn
Subject: RE: Meeting Forward Notification: West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]

Lynn-

I will be participating in the call on 9/24, but I knew Amy was interested in GW and thought she would benefit from hearing directly from USGS. We can talk more tomorrow.

Thanks-Dave

From: Slugantz, Lynn
Sent: Monday, September 15, 2014 1:38 PM
To: Bartenfelder, David
Subject: RE: Meeting Forward Notification: West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]

Hi Dave – are you not able to attend the 9/24 call with the USGS? The reason I asked is that I am hoping to keep this first call to a really small group of people. After this initial report then we plan to have a larger call or even a meeting the following week probably and we could widen the audience at that point. We can discuss tomorrow if need be when we see each other in St Louis.

Thank you,

Lynn M. Slugantz
Office of Regional Administrator
US EPA Region 7
11201 Renner Blvd, Lenexa KS 66219
(913) 551-7883 (d)
(913) 048-1129 (c)

-----Original Appointment-----

From: Microsoft Outlook **On Behalf Of** Bartenfelder, David
Sent: Monday, September 15, 2014 12:28 PM
To: Slugantz, Lynn
Subject: Meeting Forward Notification: West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]
When: Wednesday, September 24, 2014 7:30 PM-9:30 PM (UTC) Monrovia, Reykjavik.
Where: R7-RO2.C-C09-6/R7-RO; R7-RO2.C-K09-10/R7-RO

Your meeting was forwarded

[Bartenfelder, David](#) has forwarded your meeting request to additional recipients.

Meeting

West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]

Meeting Time

Wednesday, September 24, 2014 2:30 PM-4:30 PM.

Recipients

[Legare, Amy](#)

All times listed are in the following time zone: (UTC-06:00) Central Time (US & Canada)

Sent by Microsoft Exchange Server 2013

Stoy, Alyse

Subject: West Lake Landfill Call with USGS [REDACTED]
Call [REDACTED] Code [REDACTED]
Location: R7-RO2.C-K09-10/R7-RO
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From: Slugantz, Lynn
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To: Brooks, Karl;Hague, Mark
Cc: Jackson, Robert W.;Tapia, Cecilia;Carey, Curtis;Field, Jeff;Peterson, Mary;Hoefler, David;Stoy, Alyse;Cacho, Julia;Peters, Dana
Subject: Agenda for West Lake Update Meeting

Agenda for West Lake Update Meeting

- 1 – 9/8 CAG Report Out & Tentative Plans for 10/13 CAG – OPA/Jeff Field**
- 2 – Plans for Next Westlake Update for Public – OPA**
- 3 – Other??**

Upcoming Activities/Meetings -

- 9/16 & 17 - R7/OSRTI Site Tour & Meeting in St Louis**
- 9/18 – R7 Meeting w/Republic to Discuss Workplans for IB Alternatives Bird Mitigation Plans (in St Louis)**
- 9/23 – R7 Call/Adobe Connect with USGS/OSRTI & Maybe ORD re USGS Findings and Recommendations**
- 9/29 Week – R7 Meeting with USGS/OSRTI re Understanding GW Fate and Transport (Location TBC)**
- 10/13 – CAG Meeting**

Potential Future Topics - Other On-Going Action Items –

- NRC License Update – Las Vegas Lab/Chuck Hooper checking Lab's Existing License for Coverage**
- ORD Evaluating SSE Data**
- Air Monitoring Plans**

Thank you,

Lynn M. Slugantz
Office of Regional Administrator
US EPA Region 7
11201 Renner Blvd, Lenexa KS 66219
(913) 551-7883 (d)
(913) 048-1129 (c)

Stoy, Alyse

From: Bartenfelder, David
Sent: Tuesday, September 09, 2014 5:27 AM
To: Slugantz, Lynn
Subject: Accepted: West Lake Landfill Call with USGS Call [REDACTED] Code [REDACTED]

Lynn-

Will the USGS report be available a few days before the call on the 23rd to prepare for the call. I suspect there will be a lot of info contained in the analysis.

Thanks-Dave

Stoy, Alyse

Subject: West Lake Landfill Call with USGS [REDACTED]
Call [REDACTED] Code [REDACTED]
Location: R7-RO2.C-K09-10/R7-RO
Start: Wed 9/24/2014 2:30 PM
End: Wed 9/24/2014 4:30 PM
Recurrence: (none)
Meeting Status: Accepted
Organizer: Slugantz, Lynn
Required Attendees: Gravatt, Dan; Stoy, Alyse; Field, Jeff; Bartenfelder, David; jschu@usgs.gov
Optional Attendees: Legare, Amy; Kappelman, David
Categories: Yellow Category

Adobe Connect Calendar Hold - Call to discuss findings that will be in USGS' future report to EPA.

Adobe Connect Address: [REDACTED]
Call In Number: [REDACTED] Code [REDACTED]

R7 – Jeff Field, Dan Gravatt, Alyse Stoy, Lynn Slugantz
USGS John Schumacher and Zoltan Szaro
OSWER - Dave Bartenfelder, Amy Legare and Dave Kappelman

Stoy, Alyse

From: Ed Smith <esmith@moenviron.org>
Sent: Friday, July 11, 2014 10:30 AM
To: Gravatt, Dan
Cc: Washburn, Ben; Albano, Emily; Field, Jeff; Tapia, Cecilia
Subject: Re: USGS FOIA Request

Thanks for the quick response and have a great weekend.

On Fri, Jul 11, 2014 at 10:23 AM, Gravatt, Dan <Gravatt.Dan@epa.gov> wrote:

Ed, you are correct that EPA has not yet received the comprehensive USGS groundwater report.

Daniel R. Gravatt, PG

US EPA Region 7 SUPR/MOKS

11201 Renner Boulevard, Lenexa, KS 66219

Phone [\(913\) 551-7324](tel:9135517324)

Principles and integrity are expensive, but they are among the very few things worth having.

From: Ed Smith [mailto:esmith@moenviron.org]
Sent: Friday, July 11, 2014 10:17 AM
To: Washburn, Ben; Gravatt, Dan; Albano, Emily
Subject: USGS FOIA Request

Dan and Ben,

Regarding the FOIA request linked below, is it correct for me to understand EPA Region 7 has **not yet** received the comprehensive groundwater report the United States Geological Survey is preparing for your office? I may be slightly off on the actual name of the report being conducted by USGS. Dan, you have mentioned at many CAG meetings this report was being prepared and have gone as far as to show us testing results conducted by USGS upriver from West Lake, so I'm looking for some clarity.

Best regards,

Ed

--

Ed Smith

Safe Energy Director

Missouri Coalition for the Environment

c: [\(314\) 705-4975](tel:(314)705-4975) w: [\(314\) 727-0600 x14](tel:(314)727-0600x14)

www.moenviron.org

@MoEnviron

--

Ed Smith

Safe Energy Director

Missouri Coalition for the Environment

c: (314) 705-4975 w: (314) 727-0600 x14

www.moenviron.org

@MoEnviron

Stoy, Alyse

From: Gravatt, Dan
Sent: Friday, May 09, 2014 10:25 AM
To: Muenks, Shawn
Subject: RE: USGS report
Attachments: BAO_approved_USGS_review_Criss_letter_v1.1_-_for_BAO_john_toEPA_11-15-13.pdf

Here you go. This was given to the congressionals earlier this week.

Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913) 551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Muenks, Shawn [mailto:shawn.muenks@dnr.mo.gov]
Sent: Friday, May 09, 2014 10:07 AM
To: Gravatt, Dan
Subject: USGS report

Dan,

Do you have a copy of this USGS report that you can send to me?

<http://www.ksdk.com/story/news/local/2014/05/08/west-lake-landfill-report-misleading/8872819/>

Thanks,

Shawn Muenks, P.E.
Missouri Department of Natural Resources
P.O. Box 176, Jefferson City, MO 65102
Ph: (573)751-3107
Email: shawn.muenks@dnr.mo.gov

Celebrating 40 years of taking care of Missouri's natural resources. To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.

Stoy, Alyse

From: Zlatic, Mike <MZlatic@stlouisco.com>
Sent: Thursday, May 08, 2014 11:06 PM
To: Anthony, John; Ayalew, Mihretu; Bakker, Kim (kim_bakker@ssmhc.com); Boschert, Cathy (cathy_boschert@ssmhc.com); Bryan, David; Curran, Thomas; 'Daly, Rob G.'; Diedrich, Mark; Donegan, Kathrina; Drake, Tiffany; Earls, Garry; 'Estopare, Nora C., P.E.'; Fuchs, Susannah; Funk, Amy (amyfunk@illinois.edu); Garoutte, Jonathan; Gary Pondrom; Gunn, Dr. Dolores; Haasis, John; Hall, Stephen; Hamilton, Jeff; Harman, Erin; Hodges, Sheryl; Howell, Maynard (mhowell@rfpd.org); Jones, Mike; Jordan-Izaguirr, Denise; Khan, Dr. Faisal; Kocher, Gregg; LaVanchy, Matt; LeFebvre, Craig; Miner, Don (dminer@rfpd.org); Moore, Kyra; Nagel, Chris; Pabon, Cassundra; robert.j.payne.mil@mail.mil; Place, Arletta; Powers, Glenn; skip.ricketts@dnr.mo.gov; Rogus, Jeremy; Sansone, Major Dominic (dominic.g.sansone.mil@mail.mil); Smiley, Michael; Taylor, Sue (staylor@stlmsd.com); Tilley, Ryan (rtilley@sccmo.org); Trunko, Joe (joe.trunko@dnr.mo.gov); Whitley, Christopher; Whitlock, Desiree; Yates, Laura; Denise Scott (Scotts1947@hotmail.com); Janice Nelson (wjanelson@att.net); John Frierdich (jfrierdich@beltservice.com); John Steiner; Mellitz, Marcia B. (mmellitz@biosciencestrategies.com)
Subject: USGS Letter Report on West Lake Landfill

<http://www.ksdk.com/story/news/local/2014/05/08/west-lake-landfill-report-misleading/8872819/>

There is a link to the USGS letter after the narrative news report.

Mike

Stoy, Alyse

From: Tapia, Cecilia
Sent: Thursday, May 08, 2014 1:53 PM
To: Washburn, Ben; Carey, Curtis; Peterson, Mary; Hammerschmidt, Ron; Field, Jeff; Gravatt, Dan; Hoefer, David
Subject: RE: Looking for comment on USGS report from Nov 25th, 2013

Document on H drive 20140508 KSDK Inquire-responses

Dan can you answer the questions



Cecilia Tapia
Director, Superfund Division
U.S. Environmental Protection Agency - Region 7
11201 Renner Blvd.
Lenexa, KS 66219

Phone: (913)551-7733 Cell: (913)449-4171
Email: tapia.cecilia@epa.gov

The information in this email and in any of its attachments is confidential and may be privileged. If you are not the intended recipient, please destroy this message. (La informacion contenida en este mensaje electronico y cualquiera de sus anexos es confidencial y puede ser privilegiada. Si usted no es el destinatario, por favor destruya este mensaje.)

From: Washburn, Ben
Sent: Thursday, May 08, 2014 1:34 PM
To: Carey, Curtis; Peterson, Mary; Tapia, Cecilia; Hammerschmidt, Ron; Field, Jeff; Gravatt, Dan; Hoefer, David
Subject: FW: Looking for comment on USGS report from Nov 25th, 2013

Please see questions below (in bold).

Reporter is working on a story for today if we can answers to him.

Benjamin M. Washburn
Public Affairs Specialist
EPA Region 7
(913) 551-7364

From: Bissell, Grant [<mailto:gbissell@ksdk.com>]
Sent: Thursday, May 08, 2014 11:50 AM
To: Washburn, Ben
Subject: FW: Looking for comment on USGS report from Nov 25th, 2013

From: Bissell, Grant
Sent: Thursday, May 08, 2014 11:43 AM
To: 'whitley.christopher@epa.gov'
Subject: Looking for comment on USGS report from Nov 25th, 2013

Hi Chris,

I'm working on a story about the USGS analysis of Dr. Robert Chris' "Risk and Character of Radioactive Waste at the West Lake Landfill, Bridgeton, Missouri (14 Mar 2013)". I understand the analysis was given to EPA last November. **Does EPA have a comment on the USGS' findings?**

More importantly, **I'd like to know how much of EPA's recent comments have been made based on the reports generated by EMSI**, the contractor hired by the PRP's of West Lake Landfill.

The USGS analysis points out some discrepancies with EMSI's reports and some critics have said EMSI "Improperly identified the speed of groundwater flow, background radiation levels, and aquifer where the West Lake Landfill is located."

The USGS calls for a more in-depth review of the purification process of the uranium ore to better understand the wastes at West Lake and USGS agrees nearby offsite groundwater monitoring is needed to determine if leachate and radioactivity has migrated offsite.

Will EPA follow those suggestions?

I'm working on this story for our 4:00, 5:00 and 6:00 news tonight. I'll take an emailed statement or we can try to do a phone interview if you'd like.

Let me know what works best for you.

Grant Bissell
Multimedia Journalist
KSDK NewsChannel 5
gbissell@ksdk.com
Twitter: @gbissellksdk
314-803-9141



Stoy, Alyse

From: Tapia, Cecilia
Sent: Thursday, May 08, 2014 1:04 PM
To: Carey, Curtis;Peterson, Mary
Cc: Hammerschmidt, Ron
Subject: FW: EPA Testing For Offsite Radiation at West Lake

From: MO Coalition for the Environment [mailto:moenviron@moenviron.org]
Sent: Thursday, May 08, 2014 12:49 PM
To: Tapia, Cecilia
Subject: EPA Testing For Offsite Radiation at West Lake



West Lake Landfill Newsletter

EPA Region 7 Testing Offsite

May 8, 2014

Quick Links...

[Our Website](#)

[EPA Region 7](#)

[Missouri DNR](#)

[Just Moms STL](#)

[Coldwater Creek Facts](#)

Greetings!

There is a lot happening at the smoldering and radioactive West Lake Landfill in Bridgeton, Missouri. MCE continues to advocate for the transfer of the West Lake Landfill to the St. Louis Army Corps of Engineers [Formerly Utilized Sites Remedial Action Program](#) (FUSRAP).

The St. Louis Army Corps FUSRAP has safely removed and transported over 1,000,000 cubic yards of nuclear weapons related material to government sanctioned facilities. The radioactive wastes at West Lake are the same currently being handled, with great success, by the St. Louis Army Corps FUSRAP.

The St. Charles County Council is the most recent local government to [support a resolution](#) calling on our federally elected officials to put the St. Louis Corps of Engineers FUSRAP in charge of the West Lake Landfill. St. Louis County and the City of Bridgeton also passed similar resolutions this year.

AG Koster Takes Action - EPA Listens

On April 29, 2014, Attorney General Chris Koster [requested](#) EPA Region 7 perform offsite testing for radioactive wastes around the West Lake Landfill.



AG Koster also [filed a motion](#) in St. Louis County to take the landfill owner, Republic Services, back to Court. MCE applauds AG Koster's efforts on both fronts. EPA Region 7, while originally pushing back against AG Koster's request, [decided yesterday](#) to test the Bridgeton Municipal Athletic Complex after a group of concerned citizens found elevated levels of radioactivity.

USGS Review Contradicts EPA Claims

MCE received a United States Geological Survey [report](#) sent to EPA Region 7 last November. The USGS reviews a [report](#) by Dr. Bob Criss of Washington University and groundwater reports by the financially responsible parties contractor, EMSI, which you can find on the EPA website under [site documents](#).

USGS takeaways include:

Dr. Criss is correct in stating there is more than "leached barium sulfate" at the West Lake Landfill. EPA Region 7 based its 2008 Record of Decision on the only reported radioactive wastes at the site being [leached barium sulfate](#) (pdf pg. 14). The USGS report (pg. 2) says, "It is unlikely the 8,700 tons were BaSO₄ (barium sulfate) but most likely were a mixture of

waste that included BaSO₄." MCE is concerned EPA Region 7 is making decisions based on inaccurate assumptions and incomplete information.

The financially responsible parties contractor, EMSI, improperly identified the speed of groundwater flow, background radiation levels, and aquifer located below the West Lake Landfill. USGS agrees with Dr. Criss that nearby offsite groundwater monitoring is needed to determine if leachate and radioactivity has migrated offsite.

EPA Updates On Fire Barrier

EPA Region 7 has entered into [an agreement](#) with the financially responsible parties at the landfill on "preconstruction work" in order to create a barrier separating the radioactive wastes from the ongoing smoldering fire. Efforts have been stalled for several months due to finding [previously unidentified radioactive materials](#) along the originally proposed barrier line. EPA Region 7 has maintained at several public meetings that no radioactive material will be moved or impacted by the construction of the fire barrier.

EPA Region 7 recently [contracted](#) the Kansas City Corps of Engineers to help oversee the fire barrier work.

Upcoming Events

Midland Township Democratic Committee panel discussion on the West Lake Landfill.

Where: Indian Hills Library, 8400 Delport Dr, Overland, MO 63114.

When: Thursday, May 8, 2014 from 7:00-8:30pm.

Franciscan Sisters of Mary Prayer Vigil

Where: 12755 St. Charles Rock Road in Bridgeton, MO at the abandoned Phillips 66 gas station.

When: Every 2nd & 4th Wednesday of the month (weather pending). May 14th & 28th this month.

West Lake Landfill Community Meeting

Where: International Union of Operating Engineers Local 513 at 3449 Hollenburg Drive, Bridgeton, MO 63044.

When: Thursday, May 15, 2014 from 6:00-8:00pm.

Take Action

Senator Blunt, Senator McCaskill, Congressman Clay, and Congresswoman Wagner all have the power to transfer the West Lake Landfill to the St. Louis Army Corps of Engineers FUSRAP by introducing and passing legislation. This action has been done by Democrats and Republicans alike in previous years and we call on them for a bipartisan effort to do the same here.



We appreciate their [letter](#) of support for the St. Louis Corps of Engineers FUSRAP involvement at the West Lake Landfill and it's time to go further. Call and ask them to put the St. Louis Corps FUSRAP in charge at West Lake now!

Senator Blunt: 202-224-5721

Senator McCaskill: 202-224-6154

Congressman Clay: 202-225-2406

Congresswoman Wagner: 202-225-1621

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Missouri Coalition for the Environment | 3115 S. Grand Blvd. Ste 650 | St. Louis | MO | 63118

From: MO Coalition for the Environment <moenviron@moenviron.org>
Sent: Thursday, May 08, 2014 12:49 PM
To: Tapia, Cecilia
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Greetings!

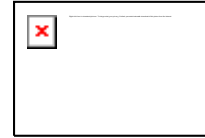
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West Lake Landfill CommUnity Meeting

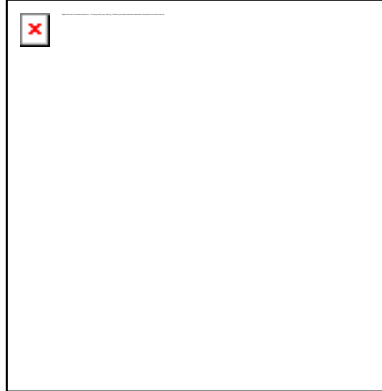
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Congresswoman Wagner: 202-225-1621

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Missouri Coalition for the Environment | 3115 S. Grand Blvd. Ste 650 | St. Louis | MO | 63118

Stoy, Alyse

From: Washburn, Ben
Sent: Thursday, May 08, 2014 12:02 PM
To: Bissell, Grant
Subject: RE: Looking for comment on USGS report from Nov 25th, 2013

Hi Grant,

Got your voicemail – thanks for sending the email. I'll work on getting a response to these questions for you.

Benjamin M. Washburn
Public Affairs Specialist
EPA Region 7
(913) 551-7364

From: Bissell, Grant [mailto:gbissell@ksdk.com]
Sent: Thursday, May 08, 2014 11:50 AM
To: Washburn, Ben
Subject: FW: Looking for comment on USGS report from Nov 25th, 2013

From: Bissell, Grant
Sent: Thursday, May 08, 2014 11:43 AM
To: 'whitley.christopher@epa.gov'
Subject: Looking for comment on USGS report from Nov 25th, 2013

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Let me know what works best for you.

Grant Bissell
Multimedia Journalist

KSDK NewsChannel 5
gbissell@ksdk.com
Twitter: @gbissellksdk
314-803-9141



Stoy, Alyse

From: Whitley, Christopher
Sent: Thursday, May 08, 2014 11:46 AM
To: Bissell, Grant
Subject: RE: Looking for comment on USGS report from Nov 25th, 2013

Grant, I'm headed out the door right now and will be out of the office for the next couple of days. I'm forwarding your inquiry to Ben Washburn for reply.

From: Bissell, Grant [mailto:gbissell@ksdk.com]
Sent: Thursday, May 08, 2014 11:43 AM
To: Whitley, Christopher
Subject: Looking for comment on USGS report from Nov 25th, 2013

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Let me know what works best for you.

Grant Bissell
Multimedia Journalist
KSDK NewsChannel 5
gbissell@ksdk.com
Twitter: @gbissellksdk
314-803-9141



Stoy, Alyse

From: Sanders, LaTonya
Sent: Wednesday, May 07, 2014 9:26 AM
To: Gravatt, Dan
Subject: FW: USGS
Attachments: BAO_approved_USGS_review_Criss_letter_v1.1_-_for_BAO_john_toEPA_11-15-13....pdf

From: Sanders, LaTonya
Sent: Tuesday, May 06, 2014 5:49 PM
To: 'Brecht Mulvihill'; 'Brendan Fahey'; 'Downey Palmer'; 'Edwilla Massey'; 'Erik Rust'; 'Joeana Middleton'; 'John Scates'; 'Lou Aboussie'; 'Mark Fowler'; 'Mary Beth Wolf'; 'Mattie Moore'; 'Miriam Stonebraker'; 'Patrick Bond'; 'Pauline Jamry'; 'Steven Engelhardt'; 'Tod Martin'
Subject: FW: USGS

FYI...

Sharing with all the West Lake congressional staff as well.

From: Sanders, LaTonya
Sent: Tuesday, May 06, 2014 5:46 PM
To: 'DeGregorio, Kerry (Blunt)'
Subject: RE: USGS

Hi Kerry,

Please see the attached.

Thanks.

From: DeGregorio, Kerry (Blunt) [mailto:Kerry_DeGregorio@blunt.senate.gov]
Sent: Thursday, April 10, 2014 9:40 AM
To: Sanders, LaTonya
Subject: USGS

LaTonya,

It is my understand that EPA has received a USGS administrative letter reviewing the document titled: *Risk and Character of Radioactive Waste at the West Lake Landfill, Bridgton Missouri*.

I would appreciate if you could share a copy of that letter by email.

Thanks you.

Kerry J. DeGregorio
U.S. Senator Roy Blunt
St. Louis District Office
7700 Bonhomme Ave
Clayton MO 63105

Ph: 314-725-4484
Fax: 314-727-3548



Stoy, Alyse

From: Sanders, LaTonya
Sent: Wednesday, May 07, 2014 9:25 AM
To: Gravatt, Dan
Subject: FW: USGS
Attachments: BAO_approved_USGS_review_Criss_letter_v1.1_-_for_BAO_john_toEPA_11-15-13....pdf

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Kerry J. DeGregorio
U.S. Senator Roy Blunt
St. Louis District Office
7700 Bonhomme Ave
Clayton MO 63105
Ph: 314-725-4484
Fax: 314-727-3548



Stoy, Alyse

From: Sanders, LaTonya
Sent: Tuesday, May 06, 2014 5:49 PM
To: 'Brecht Mulvihill'; 'Brendan Fahey'; 'Downey Palmer'; Edwilla Massey; Erik Rust; 'Joeana Middleton'; John Scates; 'Lou Aboussie'; 'Mark Fowler'; Mary Beth Wolf; Mattie Moore; Miriam Stonebraker; Patrick Bond; Pauline Jamry; Steven Engelhardt; 'Tod Martin'
Subject: FW: USGS
Attachments: BAO_approved_USGS_review_Criss_letter_v1.1_-_for_BAO_john_toEPA_11-15-13....pdf

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Thanks.

From: DeGregorio, Kerry (Blunt) [mailto:Kerry_DeGregorio@blunt.senate.gov]
Sent: Thursday, April 10, 2014 9:40 AM
To: Sanders, LaTonya
Subject: USGS

LaTonya,

It is my understand that EPA has received a USGS administrative letter reviewing the document titled: *Risk and Character of Radioactive Waste at the West Lake Landfill, Bridgton Missouri*.

I would appreciate if you could share a copy of that letter by email.

Thanks you.

Kerry J. DeGregorio
U.S. Senator Roy Blunt
St. Louis District Office
7700 Bonhomme Ave
Clayton MO 63105
Ph: 314-725-4484
Fax: 314-727-3548



Stoy, Alyse

From: Sanders, LaTonya
Sent: Tuesday, May 06, 2014 5:46 PM
To: DeGregorio, Kerry (Blunt)
Subject: RE: USGS
Attachments: BAO_approved_USGS_review_Criss_letter_v1.1_-_for_BAO_john_toEPA_11-15-13....pdf

Hi Kerry,

Please see the attached.

Thanks.

From: DeGregorio, Kerry (Blunt) [mailto:Kerry_DeGregorio@blunt.senate.gov]
Sent: Thursday, April 10, 2014 9:40 AM
To: Sanders, LaTonya
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Clayton MO 63105
Ph: 314-725-4484
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Stoy, Alyse

From: Tapia, Cecilia
Sent: Monday, April 14, 2014 1:30 PM
To: Sanders, LaTonya; Carey, Curtis; Peterson, Mary
Cc: Hammerschmidt, Ron
Subject: FW: West Lake Landfill, FW: USGS Review of Criss letter
Attachments: BAO_approved_USGS_review_Criss_letter_v1.1_-_for_BAO_john_toEPA_11-15-13.pdf

USGS letter regarding their review of the Criss report.



Cecilia Tapia
Director, Superfund Division
U.S. Environmental Protection Agency - Region 7
11201 Renner Blvd.
Lenexa, KS 66219

Phone: (913)551-7733 **Cell:** (913)449-4171
Email: tapia.cecilia@epa.gov

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From: Gravatt, Dan
Sent: Thursday, April 10, 2014 8:55 AM
To: Tapia, Cecilia; Hammerschmidt, Ron
Subject: West Lake Landfill, FW: USGS Review of Criss letter

I think this is the document you mentioned that Mr. Slifer was thinking of.

Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913) 551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Schumacher, John [<mailto:jschu@usgs.gov>]
Sent: Monday, December 02, 2013 2:44 PM
To: Gravatt, Dan
Cc: Field, Jeff
Subject: Review of Criss letter

Dan,

As you requested, the USGS Missouri Water Science Center reviewed the document titled, "Risk and Character of Radioactive Waste at the West Lake Landfill, Bridgeton, Missouri (14 Mar 2013)" by Robert Criss, Washington University, St. Louis, Missouri. Attached is our review of the subject letter. Please contact me if you have any questions.

Best Regards,

John

--

John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Tapia, Cecilia
Sent: Monday, April 14, 2014 1:30 PM
To: Sanders, LaTonya;Curtis Carey (Carey.Curtis@epa.gov);Peterson, Mary
Cc: Hammerschmidt, Ron
Subject: FW: West Lake Landfill, FW: USGS Review of Criss letter
Attachments: BAO_approved_USGS_review_Criss_letter_v1.1_-_for_BAO_john_toEPA_11-15-13.pdf

USGS letter regarding their review of the Criss report.



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Subject: West Lake Landfill, FW: USGS Review of Criss letter

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To: Gravatt, Dan
Cc: Field, Jeff
Subject: Review of Criss letter

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Best Regards,

John

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John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Schumacher, John <jschu@usgs.gov>
Sent: Friday, December 06, 2013 7:43 AM
To: julieann.warren@dnr.mo.gov
Cc: Gravatt, Dan
Subject: Fwd: Champ Landfill

Greetings,

I made contact with the Champ folks and appreciate the report you all sent. There are several wells in their expansion area that are of interest and I think they are teetering with letting me sample but are going to need to sort of "comfort" from DNR that if I find radionuclides above MCL that they are not going to be under the microscope. They mentioned a VOC issue they and you are working through on the west side of the facility and I mentioned that a VOC survey in the trees over there might be helpful and provided them Joel Burken's name.

The summary report was helpful but I would like to get my hands on the actual data from the previous rounds as it looks like the report only tables up the last two rounds and then has summary statistics. I'm finding some well logs in the area that describe brackish water in the Warsaw and below that has been wondering about some of the major ion data. Are the individual sample results available in your records? I can send a few of the 5-6 wells that are of interest if that would help. My cell is 573.368.1858.

Thanks,

John

----- Forwarded message -----

From: Nagel, Chris <Christopher.Nagel@dnr.mo.gov>
Date: Mon, Nov 18, 2013 at 3:23 PM
Subject: RE: Champ Landfill
To: "Schumacher, John" <jschu@usgs.gov>
Cc: "Fitch, Charlene" <charlene.fitch@dnr.mo.gov>, "Warren, Julieann" <julieann.warren@dnr.mo.gov>, "Nagel, Chris" <Christopher.Nagel@dnr.mo.gov>

Hi John,

Julieann Warren is our GW contact for this facility. I have copied her on this email so that you may communicate with her directly. If you have any additional questions, let me know.

Thanks

Chris Nagel

Director

Solid Waste Management Program

Missouri Department of Natural Resources

(573) 526-3900

(573) 526-3902

chris.nagel@dnr.mo.gov

From: Schumacher, John [mailto:jschu@usgs.gov]

Sent: Friday, November 15, 2013 2:08 PM

To: Nagel, Chris

Subject: Re: Champ Landfill

Chris,

Tried a couple of email contact with John Brockman but no response. Besides the rad's I'm getting curious about the possibility of brackish water in deeper monitoring wells. Who in your group is familiar with the Champ landfill and what wells at that site are being used for "background". I'd be very interested in just the major ion data.

thanks,

john

On Fri, Sep 27, 2013 at 12:18 PM, Nagel, Chris <Christopher.Nagel@dnr.mo.gov> wrote:

Thanks Branden. As you indicate, the ground water reports we have don't include any type of rad sampling. Rad is not a parameter included in our regulation appendices for groundwater monitoring.

As an FYI, the Landfill Manager for Champ is John Brockman, contact information: (jbrockman@iesi.com and 314-210-2900 cell).

Chris Nagel

Director

Solid Waste Management Program

Missouri Department of Natural Resources

(573) 526-3900

(573) 526-3902

chris.nagel@dnr.mo.gov

From: Doster, Branden

Sent: Friday, September 27, 2013 12:01 PM

To: Nagel, Chris; 'jschu@usgs.gov'

Cc: Gravatt, Dan (Gravatt.Dan@epa.gov); Muenks, Shawn; Drake, Tiffany; Cecilia Tapia/R7/USEPA/US (Tapia.Cecilia@epa.gov)

Subject: Champ Landfill

Chris:

At our West Lake Landfill meeting earlier this week, the EPA asked if we could get John Schumacher (USGS) in contact with the Solid Waste Management Program to discuss the availability of groundwater data at the Champ Landfill. I believe John would like to use data from the landfill in his background rad study.

John:

I spoke with Chris briefly about the availability of alpha/beta results. Chris did not believe there was any groundwater rad results. Can you discuss further what you are requesting?

Thanks,

Branden

Branden B. Doster
Chief - Federal Facilities Section
Missouri Department of Natural Resources
(573) 526-2739

--

John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
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Rolla, MO 65401
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email: jschu@usgs.gov

Stoy, Alyse

From: Emshwiller, John <John.Emshwiller@wsj.com>
Sent: Thursday, December 05, 2013 4:21 PM
To: Whitley, Christopher
Subject: FOLLOW-UP QUESTION RE: Responses to Questions about West Lake Landfill Superfund Site

Chris,

I have some follow-up questions regarding the agency's response to my question 7: has the EPA done any analysis about what could happen if subsurface smoldering event does reach the radioactive material? If so, what does that analysis say are the possible consequences? If no analysis has been done, why not?

Also, does the EPA consider it inaccurate to call this subsurface smoldering event an underground fire? Some people, including the Missouri Attorney General's office, have referred to it as an underground fire. What does the EPA refer to it as?

Thanks and best,
John

From: Whitley, Christopher [mailto:Whitley.Christopher@epa.gov]
Sent: Thursday, December 05, 2013 1:35 PM
To: Emshwiller, John
Subject: Responses to Questions about West Lake Landfill Superfund Site

John,

With apologies for our unforeseen delay, here are EPA Region 7's responses to your questions concerning the West Lake Landfill Superfund Site in Bridgeton, Mo. Please feel free to contact me if you need anything further from us. Also please note that I will be out of the office on Friday, December 6, for [REDACTED] but I expect to be back at my desk on Monday, December 9.

Thanks for your patience,

Chris Whitley

Public Affairs Specialist
U.S. EPA Region 7 Office of Public Affairs
11201 Renner Boulevard
Lenexa, KS 66219
913-551-7394

1. Was the radioactive material illegally dumped at West Lake as some that I have interviewed have argued?

A: There were no applicable environmental laws administered by EPA at the time this material was placed at West Lake Landfill in 1973.

2. How did the EPA end up as the federal agency responsible for deciding what to do with the radioactive waste? Given that the waste appears to have been the result of work in the atomic-weapons program, why

isn't it under the purview of the Department of Energy or the Army Corps of Engineers, through the FUSRAP program?

A: The Nuclear Regulatory Commission officially deferred regulatory oversight of the West Lake Landfill site to EPA in September 1995.

3. Some people have argued to me, pointing to past documents from the Atomic Energy Commission and other bodies, that the material taken from Latty Avenue and buried at West Lake was far more radioactive than the EPA has acknowledged. Specifically, they argue documents show the soil that mixed with the leached barium sulfate was highly contaminated, making the waste at West Lake more dangerous than initially believed. Does the EPA have any comment on this matter?

A: EPA is relying on the Nuclear Regulatory Commission's report for an accounting of this material. It is likely that the soil removed from the Latty Avenue site and mixed with the barium sulfate residue contained residual amounts of the other radiological wastes stored there. EPA has analytical results for the materials actually present in West Lake Landfill. This information, along with additional information gathered through the ongoing reassessment, will inform EPA's decision.

4. What, if any, comment does the EPA have about assertions from some outside observers that radioactive contamination several times background has shown up in groundwater samples at the perimeter of the site?

A: No groundwater data assessed through 2012 has established the existence of any groundwater contaminant plume at the site. To establish more accurate information about groundwater at the site, EPA has tasked the potentially responsible parties (PRPs) to conduct four additional rounds of groundwater sampling in 2013. The U.S. Geological Survey (USGS) will study this new data to better inform EPA's decisions. It should be emphasized that drinking water for the community is drawn from separate sources, and through monitoring is consistently found to be safe and in compliance with all relevant laws.

5. What, if any, comment does the EPA have about assertions that extremely high levels of thorium 230 and prospect that radium levels will rise significantly over the next several thousand years make the radioactive material too dangerous to leave in a landfill that is in a populated area and isn't designed or licensed to hold such radioactive waste?

A: EPA is aware that thorium 230 is present in the landfill, and that radium levels in the waste mass will rise over the next several thousand years. These issues are being considered as part of EPA's reassessment of the remedy options for this site.

6. Are workers being allowed to work at or near where the radioactive burial site locations at the landfill without protective clothing? If so, does the EPA have any concerns about such workers possibly being exposed to harmful levels of radiation? If not, why not?

A: Under detailed Health and Safety Plans established specifically for the site, remediation workers inside Operable Unit 1 of the site are required to use appropriate levels of personal protective clothing and equipment, depending on their tasks. Other workers (such as trash truck drivers, workers constructing a leachate collection system, and others operating at the landfill but outside of OU-1) generally are not required to use the same types of protective clothing and equipment because they do not face the same exposures.

7. What kinds of risks, if any, does the EPA believe could be posed to the public if the subsurface smoldering event—referred to by some as an underground fire---in the south part of the landfill area reaches the radioactive material in the north part of the landfill? Have any contingency or emergency plans been made for such a possibility? Some people I have talked with argue that the underground fire could cause radioactive material to become airborne and pose a threat to people in the area, possibly requiring people to be moved out of the area. Does the EPA have any comment on that claim?

A: EPA is committed to protecting the public by ensuring that the subsurface smoldering does not come in contact with any radiologically-impacted material at the site. EPA is currently overseeing an engineering study

funded by the PRP group that will help determine the proper placement and inform the design of an isolation barrier to prevent such contact from occurring.

8. Does the EPA believe that any radioactive material from the landfill is currently getting airborne?

A: Current air monitoring conducted by the Missouri Department of Natural Resources and analyzed by the Missouri Department of Health and Senior Services establishes there is no radiological contamination reaching the community from the site.

9. I understand the EPA is currently reviewing its 2008 decision that called for leaving the radioactive waste in the ground along with making certain protective improvements at the site. When does the EPA expect that review to be completed and made public? Can the EPA give me any idea what the review has determined so far?

A: : In response to public comments received in response to its 2008 Record of Decision for the site, EPA agreed to further investigate and re-evaluate alternative remedies for the site. That investigation and gathering of more recent data is nearing its conclusion, and the re-evaluation of the alternatives will continue. In the meantime, EPA is continuing to make public the results of the ongoing investigation through the posting of various documents and reports online at http://www.epa.gov/region7/cleanup/west_lake_landfill/index.htm

10. Was pressure brought to bear on members of the Remedy Review Board by either EPA regional officials or those at headquarters to modify its recommendations regarding West Lake in order to bring any such recommendations more in line with the decisions in the 2008 ROD?

A: No.

11. Some critics in the local community contend that the EPA hasn't done enough to protect the public from the dangers posed by the radioactive waste at West Lake. One such critic asserts that actions by officials resemble an "amateur hour." Does the EPA have any comment about criticism that it hasn't done an adequate job handling the issue of radioactive waste at West Lake and protecting the public?

A: As with all Superfund sites, EPA recognizes that not all citizens will be completely satisfied with its actions or decisions. In the face of unsupported and unscientific allegations about risk and danger, EPA is working on completing a thorough and prompt reinvestigation and reassessment of remedies for West Lake Landfill. The Agency is committed to following science and the law as it arrives at its decisions and takes its actions. Likewise, the Agency will continue to keep the public informed of its progress, and will consider the public's concerns as it makes its decisions. EPA takes seriously its mission of protecting human health and the environment.

12. Does the EPA believe that the radioactive waste at West Lake has harmed any members of the public? Does the agency believe that waste poses a threat to the public?

A: EPA's assessment is that the waste at West Lake Landfill does not currently pose a threat to public health or safety. Two key facts must be emphasized: (1) The area where this material is situated remains within a fenced, secured portion of the site that is inaccessible to the public. (2) Contractors and EPA staff working at the site are following detailed health and safety plans that provide for their protection while they do their jobs, and work plans include safeguards and protocols to prevent the public from being exposed to harmful risks. While EPA is aware of unsupported and unscientific allegations about risk and danger at the site, EPA is unaware of any actual harm that the site has caused the community.

Stoy, Alyse

From: Emshwiller, John <John.Emshwiller@wsj.com>
Sent: Thursday, December 05, 2013 3:40 PM
To: Whitley, Christopher
Subject: RE: Responses to Questions about West Lake Landfill Superfund Site

Chris,

Thanks. I will read through this material and get back to you with any follow-up questions.

Best,
John

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Stoy, Alyse

From: Schumacher, John <jschu@usgs.gov>
Sent: Thursday, September 12, 2013 9:20 AM
To: Paul Rosasco
Cc: Gravatt, Dan; Warren, Victoria
Subject: Re: 1989 letter report on vicinity water-supply wells

Thanks, Paul. I figure folks had already beat that horse before I came along, and I did see it summarized in the Ri report. Was hoping that the original letter report had a map. It maybe nothing more than the GIS data layers we all have looked at, unless someone actually spent some time in the field looking for wells and that would be very helpful to make sure I/we have not missed some.

cheers,

On Thu, Sep 12, 2013 at 8:53 AM, Paul Rosasco <paulrosasco@emsidenver.com> wrote:

I recall referencing the report information. I believe I got it from Herst. The information is presented in the RI report. I will need to dig through the files to see if we have a copy of the report and/or contact Herst to get one. As I recall, the report primarily looked at downgradient wells which is why I didn't think about it for our upgradient/background well search.

From: Gravatt, Dan [mailto:Gravatt.Dan@epa.gov]
Sent: Thursday, September 12, 2013 7:11 AM
To: Paul Rosasco; 'Warren, Victoria'
Cc: jschu@usgs.gov
Subject: FW: 1989 letter report on vicinity water-supply wells

Paul, Victoria, could you provide the reference below? I've never seen it.

Daniel R. Gravatt, PG

US EPA Region 7 SUPR/MOKS

11201 Renner Boulevard, Lenexa, KS 66219

Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Schumacher, John [<mailto:jschu@usgs.gov>]
Sent: Thursday, September 12, 2013 7:52 AM
To: Gravatt, Dan
Subject: 1989 letter report on vicinity water-supply wells

Dan,

In digging through some of the previous reports, I came across the following reference of an inventory of nearby water-supply wells in the OU1 site characterization summary report. I assume the PRP have access to this reference. I wonder why it was not brought up in our phone discussions this summer but perhaps it is buried in the mountain of report for the site.

In any event, it probably is worth looking at before we start field work in October. Do you or perhaps Paul have access to this report?

Foth and Van Dyke 1989 - Foth and Van Dyke, 1989, Letter from Rodney Bloese to Joseph Homsy regarding the West Lake Landfill CERCLA, dated December 12, 1989.

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John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

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John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey

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email: jschu@usgs.gov

Stoy, Alyse

From: Paul Rosasco <paulrosasco@emsidenver.com>
Sent: Thursday, September 12, 2013 8:54 AM
To: Gravatt, Dan;'Warren, Victoria'
Cc: jschu@usgs.gov
Subject: RE: 1989 letter report on vicinity water-supply wells

I recall referencing the report information. I believe I got it from Herst. The information is presented in the RI report. I will need to dig through the files to see if we have a copy of the report and/or contact Herst to get one. As I recall, the report primarily looked at downgradient wells which is why I didn't think about it for our upgradient/background well search.

From: Gravatt, Dan [mailto:Gravatt.Dan@epa.gov]
Sent: Thursday, September 12, 2013 7:11 AM
To: Paul Rosasco; 'Warren, Victoria'
Cc: jschu@usgs.gov
Subject: FW: 1989 letter report on vicinity water-supply wells

Paul, Victoria, could you provide the reference below? I've never seen it.

Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Schumacher, John [mailto:jschu@usgs.gov]
Sent: Thursday, September 12, 2013 7:52 AM
To: Gravatt, Dan
Subject: 1989 letter report on vicinity water-supply wells

Dan,

In digging through some of the previous reports, I came across the following reference of an inventory of nearby water-supply wells in the OU1 site characterization summary report. I assume the PRP have access to this reference. I wonder why it was not brought up in our phone discussions this summer but perhaps it is buried in the mountain of report for the site.

In any event, it probably is worth looking at before we start field work in October. Do you or perhaps Paul have access to this report?

Foth and Van Dyke 1989 - Foth and Van Dyke, 1989, Letter from Rodney Bloese to Joseph Homsy regarding the West Lake Landfill CERCLA, dated December 12, 1989.

--

John G. Schumacher

Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Gravatt, Dan
Sent: Thursday, September 12, 2013 8:11 AM
To: Paul Rosasco;'Warren, Victoria'
Cc: jschu@usgs.gov
Subject: FW: 1989 letter report on vicinity water-supply wells

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email: jschu@usgs.gov

Stoy, Alyse

From: Gravatt, Dan
Sent: Tuesday, September 10, 2013 9:54 AM
To: Paul Rosasco;'Warren, Victoria'
Cc: jschu@usgs.gov
Subject: FW: West Lake groundwater data qualifiers

Paul, Victoria, per John Schumacher's suggestion below, future groundwater sampling reports should mention that we are not following MARLAP as it pertains to the use of MDA vs. critical value, due to the need to be consistent with previous data sets that were reported against the MDA.

Thanks,
Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: John Schumacher [mailto:jschu@usgs.gov]
Sent: Friday, August 30, 2013 6:09 PM
To: Gravatt, Dan
Subject: Re: West Lake groundwater data qualifiers

Dan

Given your decision perhaps they should clearly state in their reports that they are not following MARLAP for reporting SScl. The references to MARLAP under their discussion and reg to McCurdy and others implies otherwise

Sent from my iPhone

On Aug 30, 2013, at 1:38 PM, "Gravatt, Dan" <Gravatt.Dan@epa.gov> wrote:

Paul, EPA accepts your rationale below for using the MDA rather than the critical value for the sake of consistency and comparability with the historical data set.

Sincerely,
Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

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From: Paul Rosasco [mailto:paulrosasco@emsidenver.com]
Sent: Tuesday, August 27, 2013 4:03 PM
To: Gravatt, Dan; jschu@usgs.gov

Cc: 'Warren, Victoria'; 'Lynelyn Brill'; 'Mike McDougall'
Subject: RE: West Lake groundwater data qualifiers

Dan and John.

This e-mail provides responses/clarifications to the questions raised by you regarding data validation. The responses are provided below after each comment.

From: Gravatt, Dan [<mailto:Gravatt.Dan@epa.gov>]
Sent: Thursday, August 15, 2013 5:48 AM
To: jschu@usgs.gov
Cc: Paul Rosasco; Warren, Victoria
Subject: West Lake groundwater data qualifiers

John, you raise good points below. I am copying Paul Rosasco and Victoria Warren on this e-mail so they can see your concerns. I think we'll need to have a conference call with Paul and Victoria to start with, and then follow up with your lab folks as appropriate.

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Principles and integrity are expensive, but they are among the very few things worth having.

From: Schumacher, John [<mailto:jschu@usgs.gov>]
Sent: Tuesday, August 13, 2013 7:44 AM
To: Gravatt, Dan
Subject:

Dan,

One of the issues we are struggling with is the large amount of data qualifiers in the radiochemical data tables and just what criteria is used to determine if an analyte is "detected".

1- The April 2013 report text on page 5 under sensitivity indicates that results greater than the MDA but having a CSU less than 50% are qualified with a "J". The report does not indicate the specific definition of "MDA" in the data tables and it is not clear if this is a MDA or MDC as defined by MARLAP. In either case, the apparent use of the MDA in the data tables to indicate detection of an analyte seems to contradict MARLAP guidance.

This was incorrectly stated in the report text. It should have read "results greater than the MDA but having a CSU greater than 50% of the reported result are qualified with a "J".

The term MDA is defined in the second paragraph on p. 3 of the April report. MDA is the minimum detectable activity value. It is defined by the laboratory.

A review of both U and radium values in the data tables indicates that the MDA is used to determine a detection. This is contradictory to MARLAP which the report says on p. 3 is followed.

In regards to a MDC or MDA, p 20-7 of MARLAP indicates that "Neither version of the MDC can legitimately be used as a threshold value for a detection decision. The definition of the MDC presupposes that an appropriate detection threshold (i.e., the critical value) has already been defined.

P 20-8 further indicates that if sample specific MDCs are reported, it must be clear that no measured value should ever be compared to an MDC to make a detection decision.

In the April 2013 West Lake landfill OU-1 report, it is obvious that both the radium and uranium data use the MDC to determine detection instead of using the critical level. In fact, the critical level or result is not even reported. This is not consistent with MARLAP yet the text indicates that MARLAP is followed. Why are critical levels not calculated and used.

You are correct that MARLAP states the critical value should be used. The data was reported with the MDA instead of the critical value because the standard Eberline deliverable includes the MDA and not the critical value. We did not make a specific request to the laboratory to provide the critical value.

We can certainly request the critical value going forward beginning with the October sampling event (most of the July data has already been processed by the laboratory). . We have checked with Eberline, and it is possible to re-report the August 2012, April 2013 and July 2013 laboratory results to include the critical value. The laboratory would have to reprocess the analytical data and re-report the results, we would have to re-do the data validation and resubmit the EQUIS deliverable for the past three monitoring events (August 2012, April 2013 and July 2013). We may also have to re-do the data summary tables and figures; however, this could be included as part of the final report to be prepared upon completion of the October event.

It should be noted that other than achieving strict adherence to MARLAP, changing the reporting and data validation to be based on the critical value rather than the MDA is likely to be a distinction without much difference. A quick check of a few results indicates that the critical values are not substantially different than the MDA. For example, Eberline did a quick calculation of critical values and a comparison of critical values to MDA for a few samples based on an approach that uses a large population of method blanks and the standard deviation of these blanks and the mean count rate as the basis of the calculation of the variables. In the case of the large blank population equation, this actually derives a critical level similar to the MDA. Below is an example of the calculation results for Radium-226 results on some of the samples. Please note that in one case the critical level is slightly higher.

Critical Level (Lc) by large blank population equation:

ClientID	ReportUnits	Result	Uncertainty	MDA	Lc	LSCKnown	LCSPe
LCS	pCi/l	10.38463961	1.253342236	0.216203326	0.174542401	10.30191622	100.8
BLANK PURGE TANK	pCi/l	0.038076909	0.105551811	0.228310089	0.186423989		
TOT	pCi/l	0.667817687	0.339689827	0.22623156	0.208409131		
PZ-305-AI TOT	pCi/l	0.950422816	0.459480218	0.35157031	0.180208899		

PZ-305-AI DIS	pCi/l	1.432998829	0.489750823	0.203543458	0.192023452
LR-104 TOT	pCi/l	0.61578055	0.316214446	0.17328662	0.188635397
LR-104 DIS	pCi/l	0.5789189	0.291820018	0.238529988	0.154452748
PZ-100-KS TOT	pCi/l	0.223388255	0.184957418	0.199373546	0.166347888
PZ-100-KS DIS	pCi/l	0.207543778	0.203450558	0.286632004	0.175634439
PURGE TANK TOT	pCi/l	0.538866118	0.302024845	0.203503825	0.197468249

It must be noted that if we were to switch to using the critical value as the basis for defining detections for the current groundwater monitoring activities, such a switch does raise an issue regarding comparability with the historical data including the pre-RI (NRC), RI and FS data which were all reported with the MDA and not a critical value and as such identification of detections and non-detections for the historical data were based on comparison to the MDA. The historical data reports do not include a critical value and the associated analytical reports do not have the appropriate information to allow for calculation of critical values for the historical data. These data were generated by various laboratories for various clients (consultants) at periods of 10 to as much as 40 years ago likely using laboratory software that was very different than what is currently being used. Therefore, it is unlikely that we could ever recover the information necessary to calculate critical values for the historical data.

If the historical data is reported down to the MDA and the new data is reported at the critical value, then we may have a problem with data comparability.

2- There are other qualifiers in the data tables (many of them) that do not appear to be standard MARLAP. According to MARLAP.... -Volume 1 Section 8.3.3 page 8-9 Data Qualifiers "The verification process uses a qualifier ("E") to alert the validator to noncompliance, including missing documentation, contract compliance, etc."

"The validation process uses the qualifiers listed below to identify data points that do not meet the project MQOs....

U A normal, not detected (< critical value) result

Q A reported combined standard uncertainty, which exceeds the project's required method uncertainty.

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"

"During the data validation process the data validator may use additional qualifiers based on QC sample results and acceptance criteria...

S A result with a related spike result (laboratory control sample [LCS] matrix spike [MS] or matrix spike duplicate [MSD]) that is outside the control limit for recovery (%R); "S+" or "S-" used to indicate high or low recovery.

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B A result with associated blank result, which is outside the control limit, "B+" or "B-" used to indicate high or low results.

The above qualifiers are used during validation but are translated to J, R or U in the final Q for ease of use for the end user. Each DVR has a sheet defining these qualifiers and how they translate to the final Q.

3- I do not understand the application of the qualifiers. As an example, table 6 Ra results for sample PZ-113-AD DIS. Ra-228 value is more than 3x the MDA and the CSU is only 0.83, yet

the value is flagged as a J+ and the Ra-226 result is not qualified, then the combined value is not qualified yet Ra-228 is indicated to be estimated and apparently bias high. It seems logical that if one part of a combined results is flagged, then the entire result is also flagged. The use of the J+ is not well understood in context of the MDA versus a sample specific critical level. I am the first to admit that the world of data validation and qualifiers is not my comfort zone. There are many questions regarding the various qualifiers and a thorough review of a complete radiochemical data package by our lab folks probably is in order.

Because J qualifiers do not affect the usability of the value calculated (i.e., although the result may be estimated for purposes of comparing the results to the MCL, the J qualified values are ultimately treated the same as a non-qualified result) they were not carried forward to the final values for total radium, total thorium and total uranium. . If required we can bring the qualifiers forward on future tables and again go back and revise the past tables to include the qualifiers as part of the total values as part of preparation of the final report after the October monitoring event is completed. Assuming that we continue to use the J qualifier as a final qualifier for estimated values there should not be much of an issue. If we ultimately decide to go back to using the Q, S, and P qualifiers along with the “+” and “-“ designators, there will likely be issues as to how this should be done for example in the case when the result for one isotope is qualified J+ and another is qualified J-.

Hopefully, these responses address the issues but if you need anything else, please contact us. Thank-you, Paul.

--

John G. Schumacher
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573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Gravatt, Dan
Sent: Friday, August 30, 2013 1:39 PM
To: Paul Rosasco
Cc: 'Warren, Victoria'; Tapia, Cecilia; jschu@usgs.gov
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Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Kring, Debbie
Sent: Friday, August 09, 2013 10:41 AM
To: Sanders, LaTonya;Whitley, Christopher
Subject: FW: Amended West Lake Concerns/Questions
Attachments: 2013_08_08_EPA_Questions.pdf

FYI.....

From: Tapia, Cecilia
Sent: Friday, August 09, 2013 10:03 AM
To: Hammerschmidt, Ron; Gravatt, Dan; Kring, Debbie; Asher, Audrey
Subject: FW: Amended West Lake Concerns/Questions

From: esmith@moenviron.org [<mailto:esmith@moenviron.org>]
Sent: Thursday, August 08, 2013 3:14 PM
To: Brooks, Karl; Tapia, Cecilia; aasthanislaus
Cc: Pauline Jamry; Lou Aboussie; Kerry DeGregorio; Brecht Mulvihill; Erik Rust; Joeana Middleton;
Mark_Fowler@mccaskill.senate.gov; palmer_downey@blunt.senate.gov; Steven Engelhardt; Dawn Chapman;
Ramona.Huckstep@dnr.mo.gov; Shawn Muenks; Chris Nagel; Mary Mulhearn; Jessica Blome
Subject: Amended West Lake Concerns/Questions

Administrator Brooks,

Attached is an amended list of questions from community members and the Missouri Coalition for the Environment regarding the West Lake Landfill Superfund Site. We look forward to a response.

Thanks,
Ed

Ed Smith
Safe Energy Director
Missouri Coalition for the Environment
(314) 705-4975
www.moenviron.org
@showmenocwip

Stoy, Alyse

From: Gravatt, Dan
Sent: Friday, July 26, 2013 11:50 AM
To: Sanders, LaTonya;Hammerschmidt, Ron
Subject: RE: ACTION REQUIRED: Sen. Blunt inquiry re: West Lake water data

LaTonya, I'm not sure what the Senator's office means by "worse contamination in the wells than what was previously reported". The "Draft Summary of Radium Results – April 2013 Groundwater Sampling" file that we put on our webpage prior to the June public meeting contains data identical to the table of Radium results in the full "Groundwater Monitoring Report, April 2013 Additional Groundwater Sampling Event" that we just put on our webpage yesterday. The overall data set from the April 2013 sampling event is similar to the data collected during the July 2012 sampling event, based on an inspection of the data tables and figures in both reports. No formal detailed analyses comparing the data sets has been performed yet. EPA assisted by USGS will do such an analysis once all four quarters of groundwater data are available.

Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Sanders, LaTonya
Sent: Friday, July 26, 2013 11:32 AM
To: Hammerschmidt, Ron
Cc: Gravatt, Dan
Subject: ACTION REQUIRED: Sen. Blunt inquiry re: West Lake water data
Importance: High

Hi Ron.

I received a phone call from Sen. Blunt's office stating that they have received multiple calls from residents regarding the water data that EPA just released/posted. The residents are concerned that the data shows worse contamination in the wells than what was previously reported. Sen. Blunt's staff is meeting with a group of the residents on next Wednesday, July 31, and would like to have some talking points or a briefing about the water data before the meeting.

Please advise.

Thanks.

LaTonya E. Sanders
Congressional Liaison

U.S. Environmental Protection Agency, Region 7
Office of the Regional Administrator
Office of Public Affairs
11201 Renner Boulevard
Lenexa, Kansas 66219

913-551-7555

sanders.latonya@epa.gov

Stoy, Alyse

From: Paul Rosasco <paulrosasco@emsidenver.com>
Sent: Wednesday, July 24, 2013 8:10 AM
To: Gravatt, Dan; jschu@usgs.gov; 'Warren, Victoria'
Subject: RE: West Lake Landfill RE: Request for samples, and today's background well call

Agreed. I suggest we cancel today's call as other than the update on Champ Landfill, I don't have anything to report.

From: Gravatt, Dan [mailto:Gravatt.Dan@epa.gov]
Sent: Wednesday, July 24, 2013 5:35 AM
To: Paul Rosasco; jschu@usgs.gov; 'Warren, Victoria'
Subject: West Lake Landfill RE: Request for samples, and today's background well call

Paul, thanks for the update.

Note that **I will have to miss today's background well call** – sounds like we wouldn't have that much to discuss beyond the reply from Champ.

Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Paul Rosasco [<mailto:paulrosasco@emsidenver.com>]
Sent: Tuesday, July 23, 2013 5:58 PM
To: Gravatt, Dan; jschu@usgs.gov; 'Warren, Victoria'
Subject: FW: Request for samples,

Dan,

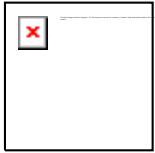
This is the e-mail I sent to the Champ Landfill and their response.

From: Thomas Jacobsmeyer [<mailto:tjacobsmeyer@iesi.com>]
Sent: Tuesday, July 23, 2013 8:42 AM
To: Paul Rosasco
Cc: John Brockman
Subject: RE: Request for samples,

Paul long story short, we can't do this. There is too many negatives for us and really no positives. Sorry, but I hope you can find another site that will let you get background levels.

Thomas K. Jacobsmeyer, P.E.
Site Engineer
IESI MO Champ Landfill
2305 Creve Coeur Mill Road
Maryland Heights, Missouri 63043
A Progressive Waste Solutions Company
(314) 409-1202

tjacobsmeyer@iesi.com



From: Paul Rosasco [<mailto:paulrosasco@emsidenver.com>]

Sent: Friday, July 19, 2013 1:13 PM

To: Thomas Jacobsmeyer

Subject: Request for samples,

Tom,

Thank-you for returning my call yesterday. As we discussed, I am the project manager for the investigation and remediation of the radioactive materials at the West Lake Landfill (the older landfill cells adjacent to the Bridgeton Landfill). EPA has asked us to collect offsite groundwater samples for radionuclide analyses to augment our existing background groundwater quality data. We would like IESI to consider allowing us to collect samples for radionuclide analyses as part of one your regularly scheduled groundwater sampling events or if necessary as a separate groundwater sampling event. The specific radionuclides that we are looking to sample for are Uranium-234, -235 and -238; Radium-226 and -228; and Thorium-230 and -232. We would collect both dissolved (filtered) and total (unfiltered) samples. We would pay all of the costs associated with this effort. If you do not have regularly scheduled event in the near future, we would pay the costs for conducting a supplemental event using the firm that conducts your sampling including costs for VOCs, trace metal, major anions and cations, and any other parameters that you would need or like to have performed.

I have included a Vcard with my contact information and have also listed this information below. If you have any questions or would like to discuss further, this please do not hesitate to contact me. Thank-you, Paul.

***Paul V. Rosasco, P.E.
President and Principal Engineer
Engineering Management Support, Inc.
7220 West Jefferson Ave. Suite 406
Lakewood, CO 80235***

***Office (303) 940-3426 ext. 5
Mobile (303) 808-7227***

***** ATTACHMENT NOT DELIVERED *****

This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could
contain a computer virus which could cause harm to EPA's computers,
network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced
into the EPA network. EPA is deleting all computer program attachments
sent from the Internet into the agency via Email.

If the message sender is known and the attachment was legitimate, you
should contact the sender and request that they rename the file name
extension and resend the Email with the renamed attachment. After
receiving the revised Email, containing the renamed attachment, you can
rename the file extension to its correct name.

For further information, please contact the EPA Call Center at
(866) 411-4EPA (4372). The TDD number is (866) 489-4900.

***** ATTACHMENT NOT DELIVERED *****

Stoy, Alyse

From: Paul Rosasco <paulrosasco@emsidenver.com>
Sent: Tuesday, June 18, 2013 11:28 AM
To: Gravatt, Dan; jschu@usgs.gov; 'Victoria Warren'
Cc: 'Mike McDougall'
Subject: Laboratory filtering and preservation.
Attachments: MP-001 Rev Sample Receiving 10-31-12.pdf; guide_wws.pdf

Mike McDougall, the Laboratory Manager of Eberline Oak Ridge lab got back to me relative the issue of having the laboratory do the filtering and preservation of the samples for radionuclide analyses. First, he provided me the attached EPA guidance (guide_wws) that indicates that sending samples for metals analyses to the laboratory and having the laboratory do the filtering and preservation is acceptable to EPA (see Section 5.4.4 on p. 19 [p. 23 of the pdf]). Mike also indicated that there is an EPA protocol for receiving non-preserved samples in the lab. They require that you preserve and then not analyze for 16 hours after preservation, (EPA 903.0 Radium-226 procedure).

Relative to John's request for an SOP, he indicated that they do not have an SOP for filtration. Based on Standard Methods, they filter all samples for dissolved fraction analyses through a 0.45 um filter media in accordance with the Standard Methods guidance that <0.45 is dissolved and >0.45um is suspended. Regarding preservation, Eberline does have a procedure for this in their sample receiving procedure (see section 8.14 of their MP-001, Sample Receiving, attached to this e-mail).

Mike indicated that it was his opinion that the issue we had with the dissolved sample results being greater than the total results appeared to be due to some type of disassociation of Radium in the suspended fractions.

Mike did indicate that if Radium has precipitated within a preserved sample, unless the person removing sample volume is very diligent about re-suspending particulate in the sample, dissolved or suspended side, the sample integrity is compromised. Radium will precipitate in an acid medium if there are any sulfate ions present. This precipitate will not be visible to the naked eye, however, it is there. He indicated that he has observed this thousands of time where someone preserved a container and for whatever reason, split the container and then one side had higher radium activity than the other and they insisted that this was not their issue, but a lab error. He indicated that it is his opinion that samplers frequently do not know what happens chemistry wise when they start adding acids. Mike also offered the opinion that quite frankly when you are dealing with alkaline earth metals, acid is not a good idea.

If the agencies require it, he indicated that it would be okay to go back to field preservation of radionuclide samples as long as we make sure that the sample is not altered after preservation. Mike indicated that preservation of Radium in the field is okay as long as the dissolved fraction is filtered prior to preservation and once preserved, the sample is sealed so that no sample volume can be taken from the sample. This is exactly what was done during the July/August 2012 sampling event. If the samples are preserved in the field, the lab can properly re-suspend and precipitate the preserved samples. He cautioned that there should be no splitting or pouring off any volume once acid is placed in the container. To my knowledge this has never occurred during any of the West Lake sampling activities.

We can discuss this issue further tomorrow. If need be, I can see if Mike can join us on our call tomorrow or another time. I would like to get this issue resolved soon as possible as we have already ordered the bottles for the July sampling event. If we change back to field filtering and preservation, we need to order different bottle setups and preservatives. Thanks, Paul.

Stoy, Alyse

From: Gravatt, Dan
Sent: Wednesday, June 05, 2013 12:29 PM
To: jschu@usgs.gov
Subject: FW: Background Groundwater sampling for West Lake
Attachments: West Lake Locations_March_18_2013 FINAL.xlsx

John, here's the e-mail with my table of well construction information.

Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Gravatt, Dan
Sent: Thursday, May 16, 2013 8:00 AM
To: jschu@usgs.gov; Warren, Victoria
Cc: Paul Rosasco (paulrosasco@emsidenver.com); Charlotte L. Neitzel (charlotte.neitzel@bryancave.com)
Subject: RE: Background Groundwater sampling for West Lake

Victoria, Paul, John,

Working through my list of to-do items from our call yesterday. Attached are the monitoring well specs for the PM Resources site (I kept my files from my time in RCRA) and the Excel spreadsheet I assembled with all of the West Lake monitoring well specs. In this spreadsheet, the tab "EPAR7_DrillActivity_1" contains the total well depths, while the tab "EPAR7_WellConstruction_V1" contains the casing intervals (all grouped together) followed by the screen intervals – check the "segment type" column for Casing or Screen. There are also a few explanatory notes on this tab in the "remark" column.

Sincerely,
Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Schumacher, John [<mailto:jschu@usgs.gov>]
Sent: Wednesday, May 15, 2013 12:05 PM
To: Warren, Victoria
Cc: Paul Rosasco (paulrosasco@emsidenver.com); Gravatt, Dan; Charlotte L. Neitzel (charlotte.neitzel@bryancave.com); Gravatt, Dan
Subject: Re: Background Groundwater sampling for West Lake

DNR log link and PA and GA reports

<http://www.dnr.mo.gov/env/wrc/logmain/>

On Wed, May 15, 2013 at 11:46 AM, Warren, Victoria <VWarren@republicservices.com> wrote:

Dial-in Number

Participant Code

Leader Code (vw)

--

John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Gravatt, Dan
Sent: Tuesday, May 21, 2013 11:27 AM
To: Warren, Victoria;'Paul Rosasco'
Subject: FW: Background Groundwater sampling for West Lake
Attachments: memphis_LF_leachate-j.1745-6584.1994.tb00656.x.pdf; Illinois_LF_leachate-10.1007_BF02380501.pdf; Mo_certified_Westlake_area.xlsx

Victoria, Paul,

Here is some more helpful information from John Schumacher at USGS for background well locations and interpreting our data as it relates to landfill leachate. Can you get him the Lab's SOP for the filtering and preserving as he requests below?

I have also done some looking and found that there are a number of monitoring wells at the SLAPS sites and Latty Avenue. I am working on getting the construction details. There are some recent rad results from those wells, though I didn't see Ra-228.

I also got a database of corrective action (ie. RCRA) sites in the area. There are six reasonably nearby, including the PM Resources site:

http://oaspub.epa.gov/enviro/rcra_profile.getmain?p_handler_id=MOD085908259
http://oaspub.epa.gov/enviro/rcra_profile.getmain?p_handler_id=MOD041881699
http://oaspub.epa.gov/enviro/rcra_profile.getmain?p_handler_id=MOD041881699
http://oaspub.epa.gov/enviro/rcra_profile.getmain?p_handler_id=MOD084396985
http://oaspub.epa.gov/enviro/rcra_profile.getmain?p_handler_id=MOD048835961
http://oaspub.epa.gov/enviro/rcra_profile.getmain?p_handler_id=MOD095486312

Unfortunately these links don't have well information, but they do have locations and contact information.

Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Schumacher, John [mailto:jschu@usgs.gov]
Sent: Thursday, May 16, 2013 8:40 AM
To: Gravatt, Dan
Subject: Re: Background Groundwater sampling for West Lake

Dan,

Not sure how much you want me to directly communicating with Paul and Victoria so I'll send this to you.

1- Attached is an excel file of the MDNR certified well records in the vicinity of your site with coordinates added. Also attached are two papers of municipal landfill leachate that may provide some background on constituents that should be indicative of landfill leachate.

2- It would seem logical to verify determine which wells are and are not affected by leachate from the landfill through (1) doing what Paul is doing and carefully looking at a comprehensive potentiometric map to indicate which wells should be "upgradient" or "down gradient", (2) looking a major ions, and other constituents like B, Ba, Sr, detection of VOCs to verify that indeed what we assume from the pot map is true. Then as we look at radionuclides (mostly Ra), we can see if there is a difference in wells (a) without leachate effects and upgradient (b) wells with leachate effects but upgradient from rad areas, (c) wells with leachate effects and downgradient or near rad areas. A simple piper plot is a fantastic visual tool to use. I'd be looking for the following as the most useful

Specific conductance
pH
Dissolved
Ca
Mg
Na
Cl
SO4
Ba
B
Fe (both total and dissolved)
Mn (both total and dissolved)
Ni
Sr
Zn
Total HCO3 or alkalinity
Total VOC detection

Ratios of Ca:Mg, Sr:Ca, 228Ra:226Ra, and Ra:Ba may be a useful way of consolidating things. Once the April data is all back, I would like to get a file in a format I can easily use, I can have a quick look and make some pipers probably like they can. We'd need to add some flags in the file for geologic unit, upgradient or not, rad area or not etc. for statistical testing, but they probably already have that information. A file format something like

Well	Date	Time	Cond	pH	Ca	Mg	Na	Cl	SO4	Ba	B	etc.....
#1	8-1-12											
#1	4-1-13											
#2												
#3												

I would look mostly at the dissolved values but both total and dissolved are good as long as they are labeled as such.

4- In regards to constituents for further monitoring in support of understand the radium issue. I am the new kid here so do not want to charge in without all the institutional knowledge that you all have, but I'd probably drop SVOCs because (a) most are sparingly soluble and unless your really in heavy leachate plume you will not see much, (b) those that you may see like some of the lighter compounds also show up on a VOC run and are easier and cheaper to see that way, (c) they are really expensive. I'd also suggest making sure that B (boron) and Sr (strontium) are on the list as I assume Ni, Fe, Mn, Ba, Zn, and As are.

5- Not field filtering and preserving. I'd like to see the SOP for what exactly what the lab is doing. I'm pretty uncomfortable with shipping raw water to the lab, then having them re-suspend (shake I assume) then filter and

preserve. The higher dissolved #s vs total have two main causes (1) a blown filter or poor filter construction, (2) routine lab error. If you take 100 samples, from just lab error I'd expect dissolved to be larger than total in 1-5 of them as long as that difference is within 5-10%. Two corners I see are (a) precipitation of Fe oxides will adsorb metals and probably Ra into the oxide precipitate (also carbonate can and will precipitate out). While resuspending, filtering, and preserving may allow that to be analyzed, it will remove them from the dissolved phase so that comparing dissolved metal across the sample rounds because problematic; (b) If, heaven forbid, they resuspend, acidify, then filter, things will be a real mess because the acid may only partially redissolve precipitates and we'll never know what is dissolved. I would think that not filtering and preserving in the field will add more uncertainty and not reduce it.

Cheers,

John

Stoy, Alyse

From: Gravatt, Dan
Sent: Thursday, May 16, 2013 8:00 AM
To: jschu@usgs.gov; Warren, Victoria
Cc: Paul Rosasco (paulrosasco@emsidenver.com); Charlotte L. Neitzel (charlotte.neitzel@bryancave.com)
Subject: RE: Background Groundwater sampling for West Lake
Attachments: PM Resources monitoring well data from 2005 GW report.pdf; West Lake Locations_March_18_2013 FINAL.xlsx

Victoria, Paul, John,

Working through my list of to-do items from our call yesterday. Attached are the monitoring well specs for the PM Resources site (I kept my files from my time in RCRA) and the Excel spreadsheet I assembled with all of the West Lake monitoring well specs. In this spreadsheet, the tab "EPAR7_DrillActivity_1" contains the total well depths, while the tab "EPAR7_WellConstruction_V1" contains the casing intervals (all grouped together) followed by the screen intervals – check the "segment type" column for Casing or Screen. There are also a few explanatory notes on this tab in the "remark" column.

Sincerely,
Daniel R. Gravatt, PG
US EPA Region 7 SUPR/MOKS
11201 Renner Boulevard, Lenexa, KS 66219
Phone (913)-551-7324

Principles and integrity are expensive, but they are among the very few things worth having.

From: Schumacher, John [mailto:jschu@usgs.gov]
Sent: Wednesday, May 15, 2013 12:05 PM
To: Warren, Victoria
Cc: Paul Rosasco (paulrosasco@emsidenver.com); Gravatt, Dan; Charlotte L. Neitzel (charlotte.neitzel@bryancave.com); Gravatt, Dan
Subject: Re: Background Groundwater sampling for West Lake

DNR log link and PA and GA reports

<http://www.dnr.mo.gov/env/wrc/logmain/>

On Wed, May 15, 2013 at 11:46 AM, Warren, Victoria <VWarren@republicservices.com> wrote:

Dial-in Number
Participant Code

Leader Code (vw)

--

John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

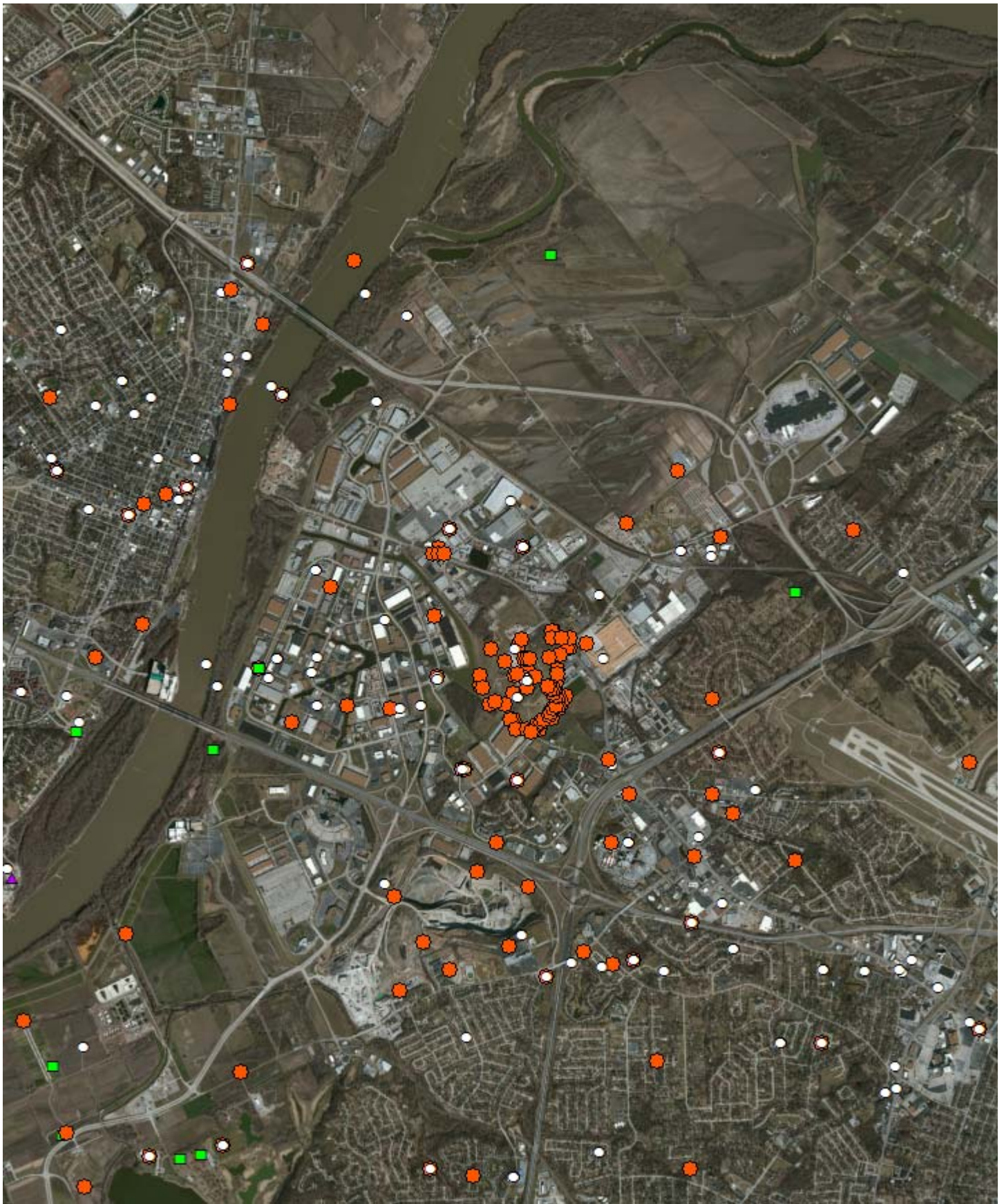
From: Schumacher, John <jschu@usgs.gov>
Sent: Wednesday, May 15, 2013 2:06 PM
To: Warren, Victoria
Cc: Paul Rosasco (paulrosasco@emsidenver.com); Gravatt, Dan
Subject: Re: Background Groundwater sampling for West Lake
Attachments: Mo_certified_wells.dbf; Mo_certified_wells.prj; Mo_certified_wells.sbn;
Mo_certified_wells.sbx; Mo_certified_wells.shp; Mo_certified_wells.shp.xml;
Mo_certified_wells.shx; Mo_well_logs.dbf; Mo_well_logs.prj; Mo_well_logs.sbn;
Mo_well_logs.sbx; Mo_well_logs.shp; Mo_well_logs.shp.xml; Mo_well_logs.shx

Paul/Victoria,

attached are two shape files of the certified wells (drilled since 1987) in a 4-5-mi radius of your site (more than 1,100) and well logs (handful and very old and probably none in existence anymore). Looks like the vast majority of wells drilled since 1987 are monitoring wells with about 114 records at or near your site. Hope this helps.

John

P.S. I only have wells drilled through about 2007 so you may want to contact MDNR wellhead section here in Rolla (573.368.2100) and ask for Matt parker or Juston Davis (I know both of them).



On Wed, May 15, 2013 at 11:46 AM, Warren, Victoria <VWarren@republicservices.com> wrote:

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John G. Schumacher
Chief, Hydrologic Investigations
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1400 Independence Road
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573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Schumacher, John <jschu@usgs.gov>
Sent: Wednesday, May 15, 2013 12:05 PM
To: Warren, Victoria
Cc: Paul Rosasco (paulrosasco@emsidenver.com); Gravatt, Dan; Charlotte L. Neitzel (charlotte.neitzel@bryancave.com); Gravatt, Dan
Subject: Re: Background Groundwater sampling for West Lake
Attachments: PA_redionuclides_in landfills-LF Leachate Final 10_03_051_web.pdf; Savannah_river_statistical_analysis.pdf; Savannah_river_radium_from pyrite.pdf

DNR log link and PA and GA reports

<http://www.dnr.mo.gov/env/wrc/logmain/>

On Wed, May 15, 2013 at 11:46 AM, Warren, Victoria <VWarren@republicservices.com> wrote:

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John G. Schumacher
Chief, Hydrologic Investigations
U.S. Geological Survey
Missouri Water Science Center
1400 Independence Road
Rolla, MO 65401
573.308.3678 573.308.3645(fax)
email: jschu@usgs.gov

Stoy, Alyse

From: Hatch, Sarah
Sent: Tuesday, April 16, 2013 1:04 PM
To: Asher, Audrey
Subject: FW: Bridgeton and West Lake Landfills
Attachments: U235 Ratio and RA226 228 with Udg Smoldering Event Map.jpg; Miss River and Rulo Combined.jpg; Groundwater Monitoring Report.pdf; Dr Criss - West Lake Rept03142013.pdf; SFS Executive Summary.pdf

From: Hatch, Sarah
Sent: Tuesday, April 16, 2013 12:05 PM
To: Hood, Rich; Tapia, Cecilia; Hammerschmidt, Ron; Garvey, Dan; Singletary, DeAndre
Subject: Fw: Bridgeton and West Lake Landfills

Sarah Hatch
Government Affairs
Office of the Regional Administrator
913-551-7199

From: Harvey Ferdman
Sent: Tuesday, April 16, 2013 12:02:01 PM
To: Hatch, Sarah
Subject: Bridgeton and West Lake Landfills

Sarah,

The following was sent to the FUSRAP program in DC.

I think it may be relevant to today's conference call.

Regards,
Harvey

Thank you for your time and interest in helping us answer questions raised by our constituents regarding the issues and challenges at the West Lake / Bridgeton Landfill.

Just to make things more interesting, the tornado that hit here on Wednesday evening April 10, 2013 was 3 blocks from the West Lake site, which is also the home of a "subsurface smoldering event" (SSE) less than 1300 feet from the radiologically-impacted materials (RIM) deposits. The SSE is commonly referred to as a dump fire. This SSE is currently growing in size and efforts to control it have become increasingly challenging as it spreads.

I have included the following for your review. **I call your attention to Dr. Criss' paper which clearly states that the chemical analysis of the performed by the NRC DOES NOT show the proper ratios of barium to sulfate to indicate that the original RIM was the end product of the process used by Mallinckrodt, but rather, indicates the RIM is much more dangerous than the barium sulfate the EPA states is there. I mention this because all subsequent decisions regarding this site have been based on the assumption that the RIM is barium sulfate.**

Republic Services (current owner of the West Lake Landfill):

Attorney who stated to me that the owner at the time the RIM was placed there did not know it was RIM
Jessica E. Merrigan of Lathrop & Gage LLP. Direct Line: 816-460-5706
JMerrigan@LathropGage.com

Note: It appears the RIM was moved to West Lake in 1973.

Attachments:

West Lake – Inside EPA ... pdf

References May 4, 2009 letter from Missouri DNR to acting DPA Region VII Administrator, William Rice to excavate this site (page 8)

States that the West Lake Landfill is not regulated by the NRC (found on Page 2)

States the following (page 3)

A 1988 report by the NRC indicates that the average radium-226 concentration at the West Lake site is about 90 pCi/g, 18 times above the 5 pCi/g ARAR. In addition, the NRC report says radium-226 activity will increase over time, increasing nine-fold over the next 200 years, or 162 times above the ARAR. "This increase in Ra-226 must be considered in evaluating the long-term hazard posed by this radioactive material," the NRC report says.

And, according to a 1982 NRC report, some samples taken at the West Lake site indicate radium-226 concentrations as high as 21,000 pCi/g, or 4,200 times above the ARAR. Relevant documents are available on InsideEPA.com

References a letter from Missouri DNR to EPA Administrator Lisa Jackson against the plan to cap the RIM in place (page 5)

References numerous local governments that have urged removal vs. capping in place (page 5 and others)

U235 Ratio and RA226 228 with Udg Smoldering Event Map.jpg

Ground Water Monitoring Report.pdf

This map and source document for EPA data that shows that ground water in areas of the West Lake Landfill that did not have RIM directly deposited on them are now showing the presence of U235, U238, U234 and RA 226 and RA 228 in amounts greater than the background generally found in this part of our state. The original, unmodified map is found on Page 84 of the Ground Water Monitoring Report dated Dec 2012. I added the data in brown (from Table 6 of the same document) as well as a rough outline of the area that has the "underground smoldering event" (commonly referred to as the fire). Note: The Ground Water Monitoring Report, dated December 14, 2012 was **prepared for EPA by EMSI**.

This raises a number of questions, including the following:

- Does this mean that Bridgeton Landfill (OU-2) is contaminated with radioactive materials? If so, is it possible some of the waste from Latty Avenue was dumped into OU-2 in addition to OU-1?
- The data seems to prove that the groundwater is being contaminated with radioactive materials. This is especially relevant because reports from both the EPA and the PRPs say that the radioactive materials are not affecting the groundwater although it appears that their own data contradicts this conclusion.

Dr Criss – West Lake Rept03142013.pdf

http://eps.wustl.edu/people/bob_criss Dr. Criss appears to be a qualified party to comment on the investigations and subsequent conclusions that the EPA has conducted and arrived at regarding the risk assessment of the West Lake Landfill. His paper (see attachment) details many of his concerns about how the studies were conducted, how the data was interpreted, and the conclusions that were drawn.

Note: Dr. Criss' paper and concerns listed within have become focal point of the surrounding community. It is wise for any solution for the final disposition of the West Lake Landfill to directly address all the issues raised in Dr. Criss' paper or public acceptance of said solution will be in jeopardy

SFS Executive Summary.pdf

This document (Supplemental Feasibility Report dated December 28, 2011) was prepared for the PRPs by EMSI (the same contractor the EPA uses for their analysis). In this paper, they make statements regarding the ground water and other hazards that contradict their own data (see Dr. Criss' paper and U235 Ratio Map). Republic states that their SFS has been "accepted by the EPA".

Dr. Criss' paper and the Executive Summary of the Supplemental Feasibility Report dated December 28, 2011 that was **prepared on behalf of the PRPs by EMSI** and referenced by Republic as having been accepted by

EPA. Note that both the EPA and the PRPs are contracting with the same firm (EMSI) for the technical analysis of this site. Republic's statement in conjunction with Dr. Criss' paper have become the cause of great concern in the public's minds regarding checks and balances and objectivity of the reports as well as fueling Dr. Criss' criticism that the proper analysis of the site is not being performed by either the EPA or the PRPs ... **since EMSI is not the only firm that can perform these studies, is it possible for DOE to commission a truly independent study?**

Miss River and Rulo Combined.jpg

These charts show that flood levels are rising in local rivers. The Missouri River at Rulo has exceeded 25-year levels 4 times in the last 6 years, exceeded 100-year levels 2 times in the last 3 years, and exceeded the 200-year level one time in the last 2 years, almost reaching the 500-year level. A chart showing similar trending for the Mississippi was also handed out.

Relevance: the analysis done for EPA and the PRPs by EMSI site the existence of a 500 year levee as adequate to protect the radioactive materials if they are left in place. With changing precipitation patterns and additional constriction of the river upstream by updates and additions to upstream levees, it would appear that the definition of a 500-year flood needs recalibration, and, therefore, protecting to the current definition of a 500 year flood may be grossly inadequate.

West Lake – rad.charts – Kay Drey.pdf

Contains a collection of unusually high radioactive readings for RIM at West Lake Landfill and a cover letter containing a brief history of the RIM stored there.

Please let me know if you have any questions or need further information that we may be able to assist with.

We look forward to your review of this situation.

Sincerely,
Harvey

Harvey Ferdman

Policy Advisor to
Missouri State Representative Bill Otto, District 70
St. Louis, MO 63017
314-469-0595
314-761-5100 (cell)

Stoy, Alyse

From: Hatch, Sarah
Sent: Tuesday, April 16, 2013 12:05 PM
To: Hood, Rich;Tapia, Cecilia;Hammerschmidt, Ron;Garvey, Dan;Singletary, DeAndre
Subject: Fw: Bridgeton and West Lake Landfills
Attachments: U235 Ratio and RA226 228 with Udg Smoldering Event Map.jpg; Miss River and Rulo Combined.jpg; Groundwater Monitoring Report.pdf; Dr Criss - West Lake Rept03142013.pdf; SFS Executive Summary.pdf

Sarah Hatch
Government Affairs
Office of the Regional Administrator
913-551-7199

From: Harvey Ferdman
Sent: Tuesday, April 16, 2013 12:02:01 PM
To: Hatch, Sarah
Subject: Bridgeton and West Lake Landfills

Sarah,

The following was sent to the FUSRAP program in DC.

I think it may be relevant to today's conference call.

Regards,
Harvey

Thank you for your time and interest in helping us answer questions raised by our constituents regarding the issues and challenges at the West Lake / Bridgeton Landfill.

Just to make things more interesting, the tornado that hit here on Wednesday evening April 10, 2013 was 3 blocks from the West Lake site, which is also the home of a "subsurface smoldering event" (SSE) less than 1300 feet from the radiologically-impacted materials (RIM) deposits. The SSE is commonly referred to as a dump fire. This SSE is currently growing in size and efforts to control it have become increasing challenging as it spreads.

I have included the following for your review. **I call your attention to Dr. Criss' paper which clearly states that the chemical analysis of the performed by the NRC DOES NOT show the proper ratios of barium to sulfate to indicate that the original RIM was the end product of the process used by Mallinckrodt, but rather, indicates the RIM is much more dangerous than the barium sulfate the EPA states is there. I mention this because all subsequent decisions regarding this site have been based on the assumption that the RIM is barium sulfate.**

Republic Services (current owner of the West Lake Landfill):

Attorney who stated to me that the owner at the time the RIM was placed there did not know it was RIM
Jessica E. Merrigan of Lathrop & Gage LLP. Direct Line: 816-460-5706
JMerrigan@LathropGage.com

Note: It appears the RIM was moved to West Lake in 1973.

Attachments:

West Lake – Inside EPA ... pdf

References May 4, 2009 letter from Missouri DNR to acting DPA Region VII Administrator, William Rice to excavate this site (page 8)

States that the West Lake Landfill is not regulated by the NRC (found on Page 2)

States the following (page 3)

A 1988 report by the NRC indicates that the average radium-226 concentration at the West Lake site is about 90 pCi/g, 18 times above the 5 pCi/g ARAR. In addition, the NRC report says radium-226 activity will increase over time, increasing nine-fold over the next 200 years, or 162 times above the ARAR. "This increase in Ra-226 must be considered in evaluating the long-term hazard posed by this radioactive material," the NRC report says.

And, according to a 1982 NRC report, some samples taken at the West Lake site indicate radium-226 concentrations as high as 21,000 pCi/g, or 4,200 times above the ARAR. Relevant documents are available on InsideEPA.com

References a letter from Missouri DNR to EPA Administrator Lisa Jackson against the plan to cap the RIM in place (page 5)

References numerous local governments that have urged removal vs. capping in place (page 5 and others)

U235 Ratio and RA226 228 with Udg Smoldering Event Map.jpg

Ground Water Monitoring Report.pdf

This map and source document for EPA data that shows that ground water in areas of the West Lake Landfill that did not have RIM directly deposited on them are now showing the presence of U235, U238, U234 and RA 226 and RA 228 in amounts greater than the background generally found in this part of our state. The original, unmodified map is found on Page 84 of the Ground Water Monitoring Report dated Dec 2012. I added the data in brown (from Table 6 of the same document) as well as a rough outline of the area that has the "underground smoldering event" (commonly referred to as the fire). Note: The Ground Water Monitoring Report, dated December 14, 2012 was **prepared for EPA by EMSI**.

This raises a number of questions, including the following:

- Does this mean that Bridgeton Landfill (OU-2) is contaminated with radioactive materials? If so, is it possible some of the waste from Latty Avenue was dumped into OU-2 in addition to OU-1?
- The data seems to prove that the groundwater is being contaminated with radioactive materials. This is especially relevant because reports from both the EPA and the PRPs say that the radioactive materials are not affecting the groundwater although it appears that their own data contradicts this conclusion.

Dr Criss – West Lake Rept03142013.pdf

http://eps.wustl.edu/people/bob_criss Dr. Criss appears to be a qualified party to comment on the investigations and subsequent conclusions that the EPA has conducted and arrived at regarding the risk assessment of the West Lake Landfill. His paper (see attachment) details many of his concerns about how the studies were conducted, how the data was interpreted, and the conclusions that were drawn.

Note: Dr. Criss' paper and concerns listed within have become focal point of the surrounding community. It is wise for any solution for the final disposition of the West Lake Landfill to directly address all the issues raised in Dr. Criss' paper or public acceptance of said solution will be in jeopardy

SFS Executive Summary.pdf

This document (Supplemental Feasibility Report dated December 28, 2011) was prepared for the PRPs by EMSI (the same contractor the EPA uses for their analysis). In this paper, they make statements regarding the ground water and other hazards that contradict their own data (see Dr. Criss' paper and U235 Ratio Map). Republic states that their SFS has been "accepted by the EPA".

Dr. Criss' paper and the Executive Summary of the Supplemental Feasibility Report dated December 28, 2011 that was **prepared on behalf of the PRPs by EMSI** and referenced by Republic as having been accepted by EPA. Note that both the EPA and the PRPs are contracting with the same firm (EMSI) for the technical analysis of this site. Republic's statement in conjunction with Dr. Criss' paper have become the cause of great concern in the public's minds regarding checks and balances and objectivity of the reports as well as fueling Dr. Criss' criticism that the proper analysis of the site is not being performed by either the EPA or the PRPs ... **since EMSI is not the only firm that can perform these studies, is it possible for DOE to commission a truly independent study?**

Miss River and Rulo Combined.jpg

These charts show that flood levels are rising in local rivers. The Missouri River at Rulo has exceeded 25-year levels 4 times in the last 6 years, exceeded 100-year levels 2 times in the last 3 years, and exceeded the 200-year level one time in the last 2 years, almost reaching the 500-year level. A chart showing similar trending for the Mississippi was also handed out.

Relevance: the analysis done for EPA and the PRPs by EMSI site the existence of a 500 year levee as adequate to protect the radioactive materials if they are left in place. With changing precipitation patterns and additional constriction of the river upstream by updates and additions to upstream levees, it would appear that the definition of a 500-year flood needs recalibration, and, therefore, protecting to the current definition of a 500 year flood may be grossly inadequate.

West Lake – rad.charts – Kay Drey.pdf

Contains a collection of unusually high radioactive readings for RIM at West Lake Landfill and a cover letter containing a brief history of the RIM stored there.

Please let me know if you have any questions or need further information that we may be able to assist with.

We look forward to your review of this situation.

Sincerely,
Harvey

Harvey Ferdman

Policy Advisor to
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